

THE PROBLEMS OF OVER-, UNDER- AND
NORMAL ACHIEVING COLLEGE
STUDENTS

(A N.C.E.R.&T. RESEARCH PROJECT)

SUPERVISOR,

DR. S.K. PAL, M.A., M.Ed., D.Phil.,

RESEARCH ASSISTANT

SHRI P.C. SAXENA, M.A., M.Ed.

DEPARTMENT OF EDUCATION
KANPUR UNIVERSITY

FOREWORD

I am happy to present this report on 'The Problems of Over-, Under- and Normal-Achieving College Students'. The Project is an endeavour to identify the problems of students at three levels of achievement. The knowledge of the differences in their problems is bound to be of considerable use to educators, guidance workers and others who may be interested in checking the erosion of talent. Failure and under-achievement involve frustration and depression of self, apart from its impact on national efficiency.

An individual who fails to function upto his optimum potentialities represents loss of input and may perhaps be termed as 'shy-resource'. Therefore, any attempt to diagnose, the malady is not only justified but is most timely and of great significance. Present study, however, investigates only one facet of the problem. A follow up study on larger dimensions may be of great benefit.

It is gratifying that the project, sponsored and financed by the N C E R & T, inspite of many hurdles and difficulties involved in this kind of work, was completed according to schedule in March 1970.

It is hoped that findings and suggestions will interest the educators and make them think of students' needs in different areas including curriculum contents. It might also provide a fresh insight in students' problems and help planning further research in the area.

Dr. S.K.Pal, Supervisor of the project and Shri P.C.Saxena, Research Assistant deserve all praise for their work which I am sure will be highly appreciated by workers in the field.

(S.B.Adaval)

Prof. & Head, Department of
Education,
University of Allahabad,
Allahabad.

PREFACE

There has been a rapid expansion at all levels of education during the last eight or nine years. The enrolment at the University stage (for Arts, Science and Commerce faculties) has risen from 0.74 million in 1960-61 to 1.69 million in 1968-69. Expenditure on education from all sources is estimated to have increased from Rs. 344 crores to Rs. 850 crores during the same period. With the increasing provisions for higher education proportion of the failures and the third divisioners has gone high. The question that calls for an answer is: whether the -achievement of all those who failed or got third classes has been commensurate with their capabilities ? If not, have they achieved less than the promises held out by their abilities or more than they could be expected to achieve in view of their potentialities ?

One of the problems in the development of human resource of the nation has been the failure of many intellectually superior students to reach their potentiality. The group of such 'unfulfilled' individuals are loss to the economic growth of the nation. The problem, therefore, has assumed manpower significance. Besides, social cost of failures and under-achievement is no less. Frustration reaction and failure to achieve make many of these individuals socially maladjusted and

suffer from mental-health problems.

The present study was undertaken in view of the common experience that probably all the residential Universities in Uttar Pradesh admit only the first or high second divisioners to the B.Sc. Part I classes in Mathematics and Biology Curriculums respectively. Even the Associated Colleges do not admit many third divisioners to these courses. But not many of these academically bright boys admitted to the B.Sc. Part I course, are able to retain their grades. Perhaps individuals under certain strains are not able to achieve the full promise of their potential. Therefore, problems of the talented achieving less than they appear to promise at one end of the continuum, and that of those who are lacking in ability but achieving better than they seemed capable of doing, have created interests in educators, parents and social workers. The report being presented concerns an attempt to discover the problems of Over-, Under- and Normal-Achieving College students. It also compares these groups on eleven areas of Mooney's problem checklist and certain background factors.

The project has been financed by the National Council of Educational Research and Training. But for their keen interest in the scheme the study could not be completed.

The project staff is very much indebted to Dr. S.B. Adaval, Professor and Head, Department of Education, University of Allahabad for planning and looking to the execution side of it at its every stage. Thanks are due to Shri L.N.Gupta, Shri M.P.Uniyal and other members of the staff for their suggestions and criticism of the items included in the Hindi adaptation of the tools constructed and adapted. It is difficult to thank adequately Shri P.C. Saxena, our Research Assistant and two of his colleagues Mrs. Sheila Bhagowliwal and Miss Kirti Darbari who helped the statistical aspect of the investigation. Miss Darbari has put us under further debt by continuing to help the project even after she ceased to be on the project staff. Thanks are also due to Shri Ram Chandra, the office-assistant of the Education Department for typing the report.

The Vice-Chancellors, the heads of the departments and the staff in the science faculties of the Allahabad, Gorakhpur and Lucknow Universities, the principals, heads and the staff of the associated Colleges of the Allahabad University are thanked for their cooperation, help and facilities they offered us in collection of the data.

Acknowledgement is also made to Psychological Corporation, New York, for permitting us to adapt,

and use Mooney's Problem Check List.

Last but not the least the project staff is thankful to each subject who participated in the study,

S.K. PAL

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INTRODUCTION

CHAPTER I

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CHAPTER I
INTRODUCTION

GENERAL BACKGROUND

Education is valued, both, for its material content and the skills it imparts. It is an agency for dissemination of culture. As an investment it has returns. To the individual the returns are in the form of higher earnings through gainful occupations. It also helps one in going up the social ladder. To the society they are in the form of higher productivity and rate of economic growth. Harbinson and Myers (1964)¹ have found a high degree of correlation between the human resources development index and per capita income. Hence there is nothing surprising if in recent years the pace of expansion in education has been pretty fast. In 1950 about 7.6 per cent of the total population in the Asian region was in schools. By 1967 the percentage rose to 14.2.²

Higher education has been valued still more as a condition and a stimulant for economic growth besides its liberalising function. In 1950-51 there were 27 universities in India, the number reached about 70 in 1965-66. Similarly the number of colleges in 1965-66 was 1800 against 542 in 1950-51. The enrolment at the University stage (for arts, science and commerce faculties) has gone up during the last eight years from 0.74 million to 1.69 million.

1. P.Harbinson & O.Myers : Education, Manpower and Economic Growth, New York, McGraw-Hill Book Co., 1964.

2. : Progress of Education in the Asian Region - A Statistical Review, UNESCO Regional Office for Education in Asia, Bangkok, (1969), p.11.

A further increase of about 10 per cent is expected every year.

Science education has also seen rapid expansion at the University stage. The inflow of students in science faculties has been great. In 1965-66 enrolment in science subjects was, 5,65,244 out of a total enrolment of 14,37,198 in Arts, Science, and Commerce courses which works out to be about 40 per cent of the total against about 30 per cent in 1950-51.

Expenditure on Education has increased from 344 crores in 1960-61 to 828.78 crores (Fourth Plan outlay), from 1.9 per cent of the national income in 1960 to 2.1 per cent in 1965. Considering the incremental contribution of Education in increasing the national productivity and economic development the investment is not sufficient. Japan spends 7.1 per cent of national income on education.

But the explosion of number at all stages of education has affected the quality of output turned out by the Universities and colleges. Standards have been eroded. Rate of failure has been high and higher has been the percentage of third divisioners. In 1962-63, for instance, 71 per cent B.As., 43 per cent of B.Scs., and 50 per cent of M.Scs., passed in third division. If this is the return of our investment in education one would wonder at our wisdom in continuing or increasing the input at the cost of other non education items.

An analysis of the results of the different Board examination for the last five years show that about 52 per cent to 55 per cent (on the national level), of the candidates appearing for the High school course and 40 % of the pupils taking higher secondary examinations fail regularly every year. In case of private candidates the percentage soars much higher.¹

THE PROBLEM

In probably all the three state Universities included in this study, namely Allahabad, Lucknow and Gorakhpur, only the first divisioners or very high second divisioners are admitted to the Mathematics and Biology groups of the science curriculum. But many students who had shown good results at the High school and Intermediate examinations failed to maintain consistency of ~~the~~ grades at the B.Sc. degree examination. What happens to these achievers ? Why this students attrition ? are the questions that seek an answer.

Following figures for the science faculties obtained for the Intermediate Board U.P. and different Universities establish the magnitude of the problem.

TABLE I.1
U.P. Board Examination (Intermediate-Scientific Group).

Year	No Regis- tered	No App- eared	No passed	I	II	III	Fail %
1966	59,553	55,112	22,427	1,858	11,555	8,674	59.30
1967	69,392	65,182	28,834	2,319	14,574	11,645	58.83
1968	78,144	74,298	31,269	2,752	15,377	12,708	57.37

1. R.H.Dave & P.M.Patel : "Analysis of Results of Board Exams", Department of Curriculum Evaluation, N.I.E, No. 1966.

TABLE I. 2

MEERUT UNIVERSITYA G R A - C O U R S E

Year	Class	Enrolled	Appeared	Pass	I	II	III	Fail %
1968-69	B.So. I	405	306	74				75.82
	B.So.II	2,729	2,553	1,917	174	991	340	24.91

TABLE I. 3

KANPUR UNIVERSITY

Year	Class	Appeared	Passed	I	II	III	Fail %
1969	B.So.II	1623	711	90	603	219	56.18

TABLE I. 4

AGRA UNIVERSITY

Year	Class	No. Appeared	No. Passed	I	II	III	Fail %
1966	B.So.I	11,773	4,086				65.29
	B.So.II	4,720	2,884				38.89
1967	B.So.I	4,300	1,148				73.30
	B.So.II	2,287	1,219	107	730	281	46.69
1968	B.So.I	6,276	1,840				70.68
	B.So.II	2,327	1,381	124	854	278	40.65

TABLE I. 5

LUCKNOW UNIVERSITY

Year	Class	(No. App- eared)	No. passed	I	II	III	Fail %
1966	B.So.II	1364	730	119	344	267	46.48
1967	do	1346	697	62	318	317	48.21
1968	do	1500	1012	131	465	416	32.53
1969	do	1613	1219	151	650	418	24.42

TABLE I. 6

ALLAHABAD UNIVERSITY

Year	Class	No. Regis- tered	No. Appea- red	No. passed	I	II	III	Fail %
1966	B.So. I	1340	1276	540				57.68
	B.So.II	631	620	473	36	167	270	23.70
1967	B.So. I	1407	1320	458				65.30
	B.So.II	711	696	490	37	185	268	29.59
1968	B.So. I	1655	1611	635				60.58
	B.So.II	699	683	488	44	172	272	28.55

TABLE I. 7

BANARAS HINDU UNIVERSITY

Year	Class	Enrolled	Appeared	Passed	Promoted	Fail%
1966	B.So.I	284	279	144		48.39
	B.So.II	414	407	220		43.48
1967	B.So. I	374	365	195	98	19.72
	B.So.II	435	422	322		23.69
1968	B.So.I	294	293	222	59	24.23* (4.09)
	B.So.II	449	443	294	134	33.63* (3.38)

* Excluding the promoted ones.

TABLE 8

DELHI UNIVERSITY

Year	Class	Enrolled	Appeared	Passed	Fail %
1966-67	B.Sc.	-	595	323	45.71
1968-69	B.Sc.	947	746	499	33.10

The failure rate (Delhi University) at the B.Sc. General has fluctuated between 40 % to 55 % for regular and near about 70 per cent for ex-students over the last ten years.¹

A glance at ^{the} percentage of failure in different universities points to the wastage in Education. The average annual cost per student, which has formed the basis of projection of expenditure during the Fourth Plan is as follows;

Recurring	:	University Departments	Rs. 1,219
		¹ Affiliated Colleges	Rs. 510
Non-Recurring	:	For Arts	Rs. 760
		For Science courses	Rs. 1,570

It is not perhaps difficult to calculate from these figures what a failure means to the state-exchequer. The wastage due to failure in India is stupendous as compared to Cambridge: 3.4 per cent Oxford: 5.1 per cent Durham: 6.1 % and at Sussex: 7.3 %.² The malady is aggravated, furthermore, in case of science students. Better job opportunities have been drawing the best of the reading population in schools and colleges to science and technology courses. But many of these students were, for some reasons, barred from reaping the full promise of their latent potential, signifying ~~wastax~~ waste of human capital resource.

1. Parikshit : The Sunday Statesman February 1, 1970.

2. Ibid

Sapra (67)¹, Jayaraman (67)², Department of Extension services, Bilaspur (66-68),³ The Mysore University (1965)⁴, The H.S.C. Board Maharashtra (1966)⁵, (1963)⁶, Chitrakara (1961)⁷, DEPME (undated)⁸, and Bahmot (1961)⁹ studied the wastage and stagnation in education among students at different ladders of education and found it ranging between 40 to 70 per cent. According to Education Commission (64-66)¹⁰ 16 per cent in class IX do not enter class X. Desai and Desai (1957)¹¹ estimated the effectiveness of secondary school system as to only 19.7% with an apparent wastage of 80.3%. Mamat & Deshmukh (1963)¹² estimated wastage at B.G.C. level to the extent of 30.3 per cent.

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1. G.N.Sapra : Educational Wastage & stagnation, Govt. of India, NOERAT-1967.
 2. M.Jayaraman : Stagnation & Wastage in Primary schools. NOERAT-1967.
 3. Department of Extension Services Govt. College of Edu. Bilaspur. : Wastage & stagnation in secondary edu., Department of Extension Services, Govt. College of Education, Bilaspur, Pamphlet No. 10, College of Education, (66-68).
 4. Mysore University. : Report on University Examination, Mysore University, Mysore, (1965).
 5. H.S.C. Board, Maharashtra : Statistical Investigation in Problems pertaining to the results of the H.S.C. Examination, Poona H.S.C. Board, (1966).
 6. _____ : A statistical analysis of failure in English. H.S.C. Board, Poona (1965).
 7. R.N. Chitrakara : Wastage & Retardation in education, Indian Journal of Educational Administration & Research, (Autumn 1961), 24-32.
 8. DEPME : Private Candidates and Secondary Schools Examinations, A Study, Directorate of Extension Programme for Secondary Education, NOERAT, (undated).
 9. T.V.Bahmot : Wastage & Stagnation in the Faculty of Medicine & Technology of the B.A. University Baroda, (1961).
 10. Education Commission : Report of the Education Commission 1964-66, Ministry of Education, Govt. of India, (1966).
 11. L.R. Desai & K.G.Desai : An Investigation into the wastage in secondary education in Gujarat, A.O. Teachers' College, Ahmedabad, Ministry of Education, New Delhi-(1957), p.9.
 12. A.R.Mamat & A.S.Deshmukh : Wastage in College Education' Gokhale Institute of Politics & Economics, Poona, Asia Publishing House, Bombay, (1963).

The latest report shows 'an overall average rate of wastage at the degree level of about 20 per cent, rising in certain branches and years of study to as high as 44 per cent.'¹

Another serious question calls for an answer. Have all those who failed to qualify at an examination, or did not do well, achieved up to their potentiality? Are they fully produced? - Perhaps individuals under certain strains are not able to achieve the full promise of their potentials. They remain under-achieved. The problem of the talented achieving less than they appear to promise, at one end of the continuum, and that of those who are seriously lacking in ability but achieving better than they seem capable of doing, at the other end of the continuum is one of the unresolved educational enigmas and has assumed man power significance. An underdeveloped nation as ours, passing through many a growing pains can, perhaps, ill afford to permit the potential resource remain 'idle' and thereby suffer the loss of 'input'. Therefore, in order to help the increase in the investment of human capital and ensure the growth of its stock, an investigation into the total educational effort, social and psychological problems of our adolescents seems imperative. Why some children fail to work upto their optimum capacity? Why their academic performance falls short of their mental capacity even when they do not suffer from any apparent deficiency.

1. Report of the Education Commission, (1964-66) p.381,

Is it due to many complicated interactions of variables relating to the students, their social environment and educational experiences prior to, and following their entrance in Universities and colleges, or students' performance at an examination is the function of personality, motivational and attitudinal factors?

The knowledge that college success is shaped by non-intellectual characteristics as well as by aptitude is not in itself a sufficient one for improving the situation. Not much seems to have been done to seek reasons for failures and under-achievement, around the student himself.

INDIAN SCENE AND STUDENTS PROBLEMS

In the peculiar situation as it is available in India where renaissance and reformation, both, have indiscernibly been sandwiched into one, where economic and political stabilities have been blown to wind, where old values are being badly by-passed. There is nothing to be surprised at if many of our students get faced with such problems which sap their energy and affect their achievement.

Researches have revealed that adolescents have many problems, that must be treated in a manner satisfactory both to them and to the social group. Areas of School, Health, Home and Society have been felt more sensitive for students. Pressey and Robinson (1944)¹ reported that conflict with parents, arguments with brothers and sisters, strict parents,

1. S. L. Pressey & F. P. Robinson: Psychology and the New Education, Harper and Brothers, New York, (1944), pp. 168-169.

unjust treatment, fear of parents, arguments about dating, are the common worries of adolescents in home life. In school area many feel unsure, they are worried about home work, test, marks and failure in the examination.

A probe into the social milieu in which an adolescent lives in and grows will perhaps foster better understanding of the individual child and his problem-world.

In recent years our civilization has considerably changed under the strain of the twin stimuli of sociopolitical events and booming complex technology. The rate of change has been so accelerated that the growing generation has found it difficult to keep pace with it. Grafting of the modern living styles on our medieval psycho-physical fabric has further accentuated the situation.

Student explosion and expansion of knowledge has not been accompanied with corresponding explosion of finance, in this country. It is revealing to note that while the per capita expenditure (in 1966) in Japan is Rs. 244; in France Rs. 295; in U.S.S.R. Rs. 378 and in U.S.A. Rs. 1,175, in India it is only Rs. 12. With the result appalling strains have been imposed on education system by the rapid growth in the student population without concomitant growth of the physical facilities and teaching personnel. As per latest figure given by UNESCO, while the teacher pupil ratio in U.K. is 1:11, in Japan 1:20 in India it is 1:15. We have not to seek the consequences far away. Universities and colleges have become more and more impersonal and students anonymous. There is a yawning gulf in

between the teacher and the taught with absolutely no chance for cross-fertilization of ideas.

Heterogeneous population of boys and girls, from all income groups, rural and urban, backward and tribal sections, having different socio-cultural environment and inherited experience of social exploitation, is converging on the same campus. Unless special provisions are made to meet the demands of the situation, problems are bound to crop up.

Industrialization has disrupted the family structure and has created conflict in value systems and caste preferences. Economic break downs and political reverses have further affected the social ethos. Rugged individualism and 'best for the gold morality' has infected the growing generation with high expectations resulting in disillusionment, frustration, inhibition and repression. Emotional problems with anti social overtones are noticed in youth. Even the affluent societies of U.S.A., U.K. and USSR are not spared. Mode of agitation and destructive behaviour of this 'Problem community' has simply been shocking. But the root lies some where else. Recent students' agitation in France, which rocked the nation started from the students dissatisfaction with excessively large classes. The student revolt at Berkely was largely stimulated by a demand of the undergraduate students for better teaching. In India, too, students have been agitating for greater participation in university/college administration, more physical amenities and fair deal in every thing from admission to appointment. Other

factors, as changing social norms, financial strain, political character of the state, less number of jobs, lack of guidance and counselling services and neglect of this 'explosive community', are no less important in fomenting their troubles.

'Psychological atmosphere' of the home has much relevance to students and their achievement problems. Besides, during the period a student is in college he experiences much of the inner and outer strains of growth. It is just likely that multidimensional problems of the individuals might be hampering their healthy functioning in society and obstructing their optimum academic growth. Conversely, those who are not pestered by innumerable problems, or, who having known their problems have sought and received treatment may be applying themselves better to their studies to overshoot the promise held out by their mental-abilities.

There are however, very few studies of the students' problems arising out of the complex interplay of motives, wishes, needs, emotions, attitudes and abilities on the one hand and the demands of college, society, family on the other as factors in deviant achievement.

Therefore, the present investigation is undertaken to determine empirically the extent, range and nature of over-, under- and Normal-achieving students' problems and to know in what degree do these problems press upon the discrepant achievers to help or retard their academic performances.

NEED OF THE STUDY

In order to effect proper treatment to the discrepant achiever and to ensure optimum functioning

(contd.)

for him, a study of his problems is warranted. " I liked collegebut it is too indifferent to my needs " was the response of a repeater in the class to a questionnaire. Could it be symptomatic of his ailment ?—is an eternal question that besets students, counsellors, and administrators. An under-achiever is an underproduced individual, losing him means corresponding loss of human resource. Such a concern as of studying the under-achiever, the unutilized wealth is particularly timely in areas under development (as India is), where limited resources make it imperative to achieve a maximum output.

Knowledge of students problems along with its contribution in yielding achievement commensurate with or less than the ability might throw light for educational planners and guidance workers to tread this area with ameliorative measures. Bridging the gulf between the achieved and the latent potential would mean putting more human resources for national growth with promise of automatic increase in the returns from the investment in education.

The study seeks to know the problems of Over-, Under- and normal-achieving students along with their study-habits, self-concept, attitudes, and the number of hours put in for study besides other background factors such as socio-economic status, interests and future vocational plans.

THE CONCEPT OF UNDER- AND OVER- ACHIEVEMENT

The concept of over and underachievement takes into account deviations in academic achievement (plus and minus) from some standard of expected or predicted achievement.

The questions that arise here are,

(i) Where from that standard comes ?

(ii) How to measure individual's latent potentialities and what abilities should form the basis for judging underachievement.

(iii) How to fix the optimum and how much below it the under-achievement begins ?

(iv) Who are the over-achievers ?

Perhaps, some marginal values of deviations either side of the expected or predicted achievement could be treated as normal. And, over-and under-achievement might be taken to exceed this deviation.

Theoretically, under-achievers can be had at all levels of intelligence. They can be classified with reference to the group they are placed in. A more sophisticated classification might require consideration of the sub-culture or the goal-orientation that a group or the individual has. Girls who aim at marrying and settling to 'fire-side' happiness view academic achievement differently than those who study to join a career. They may have other accomplishments. Similarly a sportsman who is the 'beau-ideal' of the play fields puts different value to curricular achievements. Children from homes which follow a family profession or business and wherein they have been partly working or intend to join later have different academic motivation. Sub-cultural clash between social skills, habits and attitudes learned and ~~xxx~~ valued in home and those appropriate in academic achievement might also be responsible in differential curricular achievements.

Besides, requirements of different curriculums, institutional and environmental pressures may leave varying psychological impact depending on the propensities that the individual or the members of a group have.

Therefore, with all these complexities and unresolved questions the search for a 'fool-proof' method for identifying under-and over-achievers is yet a continued process. Efforts to unravel the perns have so far succeeded only in making the problem more knotty, with the result that, research in this 'tricky - area'¹ has been largely inconclusive and often contradictory. Most of the researches, reported, have formulated their own operational definitions to classify under- and over- achievers.² In accordance with their definitions methods have also varied from complicated statistical devices to simple cut off points.

In the present investigation low correlation between Achievement and Intelligence, coefficients ranging between 0.06 to .32 for different universities ~~ranging between~~ and associated colleges barred our choice for a regression model, for reasons that unless 'r' is large the regression equation may not offer much help in forecasting accurately what a person can be expected to do.

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1. R.L.Thorndike : The concepts of over-and under-Achievement, Bureau of Publications, Teachers College, Columbia University, NY.(1963), p.1.
 2. Jane Beasley : Underachievement: Review of the Literature, Talented Youth Project, H.M.L., Teachers College Columbia University, NY., (March 1957), p.21.

Therefore, to investigate the problem 'the out off points' in the technique of ~~xxx~~ 'reasonable expectation' was chosen (discussed in chapter III). The out off points help "to avoid overlapping distributions, and also to obtain a significant difference, on the predictor and criterion measure, between the comparison group".¹

Much of the controversy is set at rest by Motto (1959)², who observed that "..... it appears clear that who the underachievers are, may be as important, as the fact that they are underachievers", and Shaw (1961)³ wrote, "At the present time and in the practical situation, such a rule of thumb is probably as good or better than a more sophisticated definition. If future research is able to define the parameters of underachievement in more adequate fashion than is presently the case, the more complex differentiations may be justified". Hence to work with operational definition seems to be a justifiable practice. Under-achiever for our purpose is one whose score on the Intelligence test is .5 S.D. above the class mean and achievement .5 S.D. ~~above~~ below the class mean. The opposite category will make up the group of over-achievers.

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1. A.K.Grivastava ; "An Investigation into the Factors Related to Educational Underachievement. Doctoral thesis, Patna University, (1966), pp. 74-75.
 2. J.L.Motto : "A reply to Dragow on underachievers. Journal of Counsel. Psychology, 6,(3), (1959), pp. 245-247.
 3. M.C.Shaw : "The Interrelationship of selected personality factors in high ability under-achieving school children." Final Report project 58-M, California State Dept. of Public Health (August 1961).

CHOICE OF PREDICTOR VARIABLE

Thorndike (1961¹ 1963)² assumed that initial level of achievement would be substantially related to final level of achievement hence the initial achievement could easily be used to predict final achievement. Bloom and peters (1961)³, and Garrett (1964)⁴ used High school grades to predict College grades. But the difficulty is that the use of this predictor is limited to a particular type of design wherein we measure achievement in clear sequence of time i.e, between the period of initial and final achievement, In designs other than this particular one, initial achievement as predictor is not of such help.

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1. R.L.Thorndike : Methodological issues in relation to the definition and appraisal of underachievement. Paper presented before the conference on the measurement and evaluation of Over-, and under-achievement. Procedures of a conference on research methodology in training. Washington University, St. Louis, Missouri, (April, 1961).
 2. _____ : The Concepts of Over-, and Under-achievement. Bureau of Publication Teachers College, Columbia University NY. (1963).
 3. B.S.Bloom & F.R.Peters : The use of academic prediction scales for counselling and selecting College entrants. The Free Press of Glencoe, NY., (1961).
 4. H.E.Garrett : A review and interpretation of factors related to scholastic success in Colleges of Arts and Sciences and Teachers college. Journal of Experimental Education., 18 , (1949), pp. 91-138.

The other kind of predictor variable used in researches is scholastic Aptitude tests. American researches have made use of SOAT (School College Ability Test). In India we do not have such tests ready for use. Those available are standardised for lower classes and for lower age-groups which if used on higher age group and higher classes might misclassify students.

Another criticism of verbal scholastic aptitude tests is that they might under or overestimate the subject's ability due to verbal advantage or disadvantage. Moreover, if it correlates very highly with achievement, and if the same ability is measured by an achievement test also the result would be inevitably overlapping and may lead to more errors of measurement. It is also ~~sometimes~~ contended that scores obtained on scholastic aptitude tests do not remain stable. Raph and Tannenbaum (1961)¹ found that decline or improvement in scores is noticed within a short period of time.

Intelligence tests, too, are used as predictors of achievement. But culturally loaded tests fail to predict truly in case of disadvantaged and culturally deprived children. They also do not measure comprehensively cognitive abilities. Creativity and intelligence being two different things are correlated low. Therefore, a segment of under- or over-achieving population may not be truly classified.

1. J.B. Raph & A.J. Tannenbaum : Underachievement: Review of Literature
 M.L.T., Teachers College, Columbia University, NY. (December 1961),
 mimeographed.

Since creative and socially gifted may be missed by scholastic aptitude tests, teachers judgement is also used as predictor. But teachers' judgements may also be biased for considerations like personal appearances, class-room conduct, or social and economic backgrounds. In India the classes are large, teacher-taught ratio adverse and relationship is impersonal. It is difficult, here, to place any reliability on teachers' judgements in case of all students.

It is also suggested that all 'unmodifiable factors' be used together as predictor. But it is feared that throwing a large number of predictor in regression formula might lead to erroneous confusion. And perhaps there would be no harm if we use only one predictor, may be scholastic aptitude or Intelligence test to predict achievement. Other predictor variables may be used as causative factors or correlates of the deviations in predicted and actual achievement.

Despite many limitations of the intelligence tests, available for use Freehill (1961)¹ considers them invaluable. Educational policies commission of U.S.A. (1950)² recommends "..... the use of intelligence tests in identifying gifted children and youth, not because they have been demonstrated to measure accurately the inner structure or capacities of human personality, but because they have been found to provide data from which the subsequent behaviour of the individual can be roughly predicted. The accuracy of such prediction

1. M.P. Freehill : Gifted children, Macmillan Co., Ny. (1961).

2. Educational Policies Commission 1950 : Educating the Gifted, Washington 6, D.C. National Education Association, pp. 41-42. In M.P. Freehill, Gifted Children. Macmillan Co., Ny. 1961.

is far from perfect, but it is accurate enough to justify the use of intelligence test scores, along with other criteria....." Therefore, only one predictor, Joshi's Mental abilities test referred to as (HGTGMA) was used in this study. Another possibility could be, to use one non-verbal test also along with this test. But for practical difficulties in not getting a suitable test, testing considerations and statistical complications in combining the scores, particularly if the items on both the tests were not equal in number, did not make it possible for us to use both types of predictors.

CHOICE OF CRITERION VARIABLE

Finding out a dependable and reliable criterion has been the most difficult task for the researchers in the area. Different criterion measures have been attacked on statistical and other grounds only to reach at no agreement. And researches continue along the feasible and practical line.

In America most of the reported researches have used Grade Point average (GPA) as a criterion variable. Other studies E.M. Drows (1957)¹ Froehlich & Mayo,² Carmical (1964)³, Edward and Tyler⁴ and others have preferred Achievement test. Besides these, teachers'

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1. E.M.Drows : What about the gifted child ? College of Education Quarterly Fall, 3, (1957), pp. 3-6.
 2. H.P.Froehlich & G.D.Mayo : A note on under- and over-achievement measure. Personnel Guidance Journal, XLI, 7, (March 1963), pp. 621-623.
 3. L.Carmical : Characteristics of achievers and Under-achievers of a large senior high school. Personnel Guidance Journal, (Dec. 1964), pp. 390-395.
 4. M.P.Edward & L.E.Tyler : Intelligence, Creativity and achievement in a non selective public junior high school, Journal of Educational Psychology 56, (2), (April), 95-99.

ratings; actual scholarship grades; prizes and peer ratings have also been used as criterion measure. The difficulty that arises out of the use of these methods for classifying under-achievers has been pointed out by Shaw (1961).¹ Pippert and Archer (1963)² in his study using the Achievement test scores selected only 7 boys and 12 girls as underachievers. Using the grades he got 14 boys and 7 girls as under-achievers, with an overlap of only 2 boys. Wellington and Wellington (1965)³ obtained 6 underachievers with the use of achievement test. There was an overlap of only three cases.

Both the measures have been criticised and defended in their own but for us in India they are not available. Thus we can rely on any one of the following criteria:

- (a) Achievement Test score
- (b) Teacher's Ratings
- (c) Examination marks.

Achievement Tests for the B.Sc. level (the subjects of this study) in Mathematics, Statistics, Chemistry, Physics, Zoology and Botany are not available either as a comprehensive measure or in individual subject areas. Neither it was feasible to construct any.

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1. M.C.Shaw : The interrelationship of selected personality factors in high ability under-achieving school children. Final report project 58-M, California State deptt of public health August.(1961),
 2. R.Pippert & E.S.Archer : A Comparison of two methods for classifying under-achievers with respect to selected criteria. Personnel Guidance Journal, XLI (9), (May 1963), pp.788-791.
 3. C.B.Wellington: The Under-Achiever: Challenges and & W.Wellington guidelines ,Rand McNally & Co.,Chicago. (1965).

Reliability of Teachers ratings in the present University-college set up is much questionable. Unbalanced teacher-taught ratio, large-classes, reliance on lecture method, least personal contacts, students and teachers polarizations, leave much scope for unacceptable subjectivity and wrong ratings.

The third and the only alternative is acceptance of examination marks as criterion measure. The ~~exam~~ essay type examinations as they are in vogue in our country have generated enough heat of criticism. The University Education Commission (1948)¹ pointed outThe essay type of examination...isinvalid.....inadequatesubjective and therefore not reliable....."

Others have also ~~criticised~~ criticised essay type examination on the grounds that it leads students into irrelevancy and fails to develop intellectual power and methods of dealing with the problems which a student has to carry from school to life. They have advocated for objective or multiple type questions. But much can be said against this type also. It retards linguistic abilities, as answering objective type questions requires telegraphic language rather than a discursive style. Moreover, perhaps it is also against the principles of educational psychology to give 'misinformation', and multiple choice questions

1. University Education: Report of University Education Commission, New Delhi, Govt of India (48-49), p. 328.

require placement of many incorrect statements along with a correct one.

Pidgeon and Yates (1957)¹, found retest reliability for the essay tests to be .77 if the same examiner re-marked and .72 when different examiners re-marked.

Standards Committee(1965)², held that the essay-type tests measure those larger outcomes of education which may not be measured by other paper-and-pencil type tests.

Lehtovara (1966)³ also found reader reliability of essay examination above .8.

For our situation where the objective type tests are not yet in fashion the only alternative left is to rely on the essay-type examination that the boys take to qualify themselves for the next class. Two types of examinations are prevalent in the country namely internal and external. These types are applicable in school situations. Where year to year promotion is allowed on the result of the examination conducted by the school it is called internal. And, when at the end of certain period of schooling and having crossed the lower bars students take the public or Board examinations it is called the external. In the University situation there is only one examination a year, to qualify the students for the next class.

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1. D.A.Pidgeon & A.Yates : Symposium: the use of Essays in selection at 11; IV Experimental Enquiries into the use of Essay-type English Papers, British Journal of Educational Psychology (1957), 27-37-47.
 2. Standard ~~Examination~~ Committee : Report on Standards of University Education, New Delhi, U.G.C., (1965).
 3. A.Lehtovara : The Predictiveness of the Finnish Matriculation Examination; A Differential Psychological Study (Psychological Abstract 1966, 40, 1054) Abstract from Annales Academiae Scientiarum Fennicae, 1966, 13-140.

In the present study marks obtained by the students at their B.Sc. Part I examination were taken as the criterion variable. B.Sc. Part I examination is an University examination in all the three Universities. The associated and affiliated colleges have the same papers and the examiners, for them, too, are appointed by the same body. The evaluation scheme is supervised and coordinated by the Head Examiner. Instructions are given by the Head Examiner to his assistants, and models of examined answerbooks are exchanged to obtain homogeneity in marking. Moreover, these examiners have been evaluating answerbooks from each other's university and have qualified themselves to ^{be} appointed as examiner after a specific period of service. The examiners are also paid for the evaluation of answerbooks. As such, a great degree of objectivity, impartiality and concordance can be expected of the examiners in evaluation of answerbooks and award of grades. Students, too, put a great value to these examinations as they guarantee a pass-port for admission to higher courses and lucrative jobs.

RATIONALE FOR ACCEPTING TOTAL MARKS OF ALL SUBJECTS
AS CRITERION

(4) Paper wise reliabilities as reported in Indian studies are low, (Harper 1967¹ Hindi .56 History .35 Biology .50 Mathematics .72). There is a high probability of misclassification on the basis of individual paper because of low reliability.

1. A.E. Harper Jr. : ^E Ninty Marking Ten - A study of Examinations; Indian Educational Review, 2, (1967).

(2) The same student may not fall in the same group in all the individual papers. Similarly the same student may be an over-achiever in one subject and under-achiever in another.

(3) The total marks of all the papers are more reliable than single paper and its reliability is comparatively higher as shown by the empirical studies of S.S.C. Board, Maharashtra (1960)¹ and Gayan et. al. (1961)² and theoretical analysis by Vernon (1940)³ and Harper (1965).⁴ These studies justify the use of total marks as criterion measure.

THE OBJECTIVES OF THE STUDY AREA

(1) To know the problems of Over-, Under- and Normal-Achieving college students in the science curriculum and to determine their intensities.

(2) To ascertain if there is any significant difference between the groups of Over-, Under- and normal-achievers ~~in~~ in the eleven areas of Mooney Problem check List namely, HPD, FLE, SRA, SPR, PPR, OSM, HF, MR, ACW, CTP, and its total.

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1. S.S.C.Board : Statistical investigation on Problems pertaining to the Results of the S.S.C. Examination Poona: S.S.C. Board, (1960).
 2. A.K.Gayan et al : Measurement of Achievement in Mathematics, Indian Institute of Technology, Kharagpur, (1961).
 3. P.E.Vernon : The measurement of Abilities, University of London Press, London, (1940).
 4. A.E.Harper Jr : Down with the validity coefficient Journal of vocational and Educational Guidance, (1965), 3, 76-86.

(3) To find out twenty five most frequently marked problems of the Over- and Under-achievers on the MPOL and to see if there is any significant difference in the percentages of the subjects in two groups^S marking a problem.

(4) To determine whether there are any significant differences between the three groups under study on the following variables:

- (a) study-Habits
- (b) self Concept
- (c) Attitude
- (d) Interests
- (e) Future Plans
- (f) University/College Education and
- (g) Socio-Economic Condition.
- (h) Health-status

(5) To find out if there is any significant difference in problems recognised on the MPOL and other variables given in (4) of the over-, Under-, and Normal-Achievers belonging to the following sub-groups.

(i) different curriculums (Maths Group and Biology group).

(ii) Associated colleges of Allahabad University.

(6) To offer suggestions regarding the utility of these findings for Educational planning and guidance.

CONCEPTUAL FRAMEWORK

The causes of the phenomenon of Under-, Over- and Normal-achievement relates to the factors germane to the Students' Health, Finance and Living conditions, social, Recreational, Psychological, Courtship and Marriage, Home and Family, Moral and Religion, Future: Vocational and Educational and Teaching Procedures. Besides, college education, study hours, educational and other interests, attitudes, future-plan, self-concept and study-habits are some of the other possible factors that could cause differential achievement.

Some hypotheses are based on the above framework and which can be tested are described below. The hypotheses have been formulated on the basis of previous studies and discussion with experts and teachers.

1. The under-achievers are troubled with larger number of problems as compared to Overs- and Normals-.

2. Under-achievers tend to indicate more problems in the areas of Finances: Living Conditions and Employment; Adjustment to College Work-, Curriculum and Teaching Procedure.

3. Under-achievers are concerned more with outdoor games as compared to Overs- and Normals.

4. The over-achievers have better study- Habits. They devote more hours to study and possess positive attitude towards school, Peers, Teacher and Education.

5. Problems of Under-, Over- and Normal-Achieving students differ from Curriculum to Curriculum.

6. The Unders, Overs-and Normals-from the University and Associated Colleges are alike with respect to their problems, study-habits, self-concept, study-hours and attitudes.

REVIEW OF RELATED STUDIES

CHAPTER II

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CHAPTER IIREVIEW OF RELATED STUDIES

Students activities 'on the Campus' and 'off the Campus' have caused concern among educators and administrators. Dilution and devaluation of Educational standards have, furthermore, required the empirical research to answer the question: What are students' problems and how do they affect their differential achievement? Rao (1967)¹, All India Educational and Vocational Guidance Association (1965)², Delhi and Allahabad Universities (1962)^{3,4}, sinha (1962)⁵, World Brotherhood (1960)⁶ and a few others have studied students' problems. But not many studies have been done to know the impact of students problems on their achievement and still less in relation to under- and over-achievement.

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1. S.N.Rao : Adjustment Problems of College students. Journal of Vocational and Educational Guidance, 15, (1967), 85-92.
 2. All India Educational & Vocational Guidance Association. : Guidance Needs of College students- An All India Survey. All India Educational and Vocational Guidance Association, New Delhi, (1965).
 3. Delhi University : Employment survey of the Alumni of Delhi University. Directorate General of Employment and Training, New Delhi, (1962).
 4. Deptt. of Education Allahabad University : Problems of students in Allahabad University. Allahabad University, (1962).
 5. A.K.P. sinha : Counselling services in Universities. Indian Journal of Psychology, (1962), 37, 2-4.
 6. world Brotherhood Bombay : Report on a survey of the aptitudes, opinions and personality traits of a sample of 1706 students of the University of Bombay. Orient Longmans, Bombay, (1960).

Much research seems to have been carried out exploring various non-intellectual factors related with scholastic achievement. Level of education, the variable studied and the techniques have differed widely; results, too, are generally not comparable as the sample, tools and designs have not been identical. Therefore, review of the studies done have been presented in four categories:

(I) Definition and classification of Over-, and Under-achievers,

(II) Review of studies related with students' problems.

(III) Different variables connected with Under- and Over-achievement,

(IV) Indian studies connected with achievement.

(I) DEFINITION AND CLASSIFICATION OF OVER- AND UNDER-ACHIEVERS.

Tolar (1969)¹ has operationally defined an underachiever as one who has: (a) at least average current intellectual functioning; and (b) a placement on a standard achievement test of at least one standard error of estimate below expectancy based on his own I.Q.

Kenneth M. Parsley Jr. (1964)² classified under and over achievers as follows;

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1. Alexander Tolar : Incidence of Underachievement at the High school Level, Journal of Educational Research, Vol. 63, No. 2, (October 1969), p. 63.
 2. K.M. Parsley Jr. : Further Investigation of sex Differences in Achievement of Under; Average; and Over-Achieving Students within Five I.Q. Groups in grade Four Through Eight, Journal of Educational Research (Jan 1964) 57-62

The mean of the achievement test grade placement score within each of the I.Q. subgroups was then determined and 0.6 grade placement was added to and subtracted from each of these means to determine the limits. All students with achievement scores within the limits. All students with achievement scores within the mean plus and minus .6 grade placement were designated as over-achievers.

An Over-achiever exceeds an aptitude based expectancy of academic performance. Conversely, an under-achiever falls below his expected performance.there is high likelihood that the genesis of the above contradictory conclusions rests with the operational rather than abstract definition of discrepant achievement i.e., with the specific techniques employed for sample selection.¹

Combs (1969)² definition is based on the following criteria: If a student obtained a full scale I.Q. of 115 or better on Wechsler Adult Intelligence scale his cumulative grade-point average was computed. If this average fell below the first quartile in scholastic achievement for his grade he was defined as an underachiever; if the average was above the median for his grade, he was considered an achiever.

1. W.W. Farquhar:
& D.A. Payne

"A classification and Comparison of techniques used in selecting Under- and Over- achievers." Personnel and Guidance Journal, Vol. XLIII, No. 9, (May 1964).

2. G.F. Combs

: Perception of self and scholastic Underachievement in the academically capable. Personnel & Guidance Journal, Vol. XLIII, No. 1, (Sept. 1964), p. 47.

Carmical (1964)¹ called the higher performing group "achievers"; and the lower performing group "Underachievers". His subjects were juniors and seniors whose Otis Intelligence scores were between 110-125 and whose scholastic ranks were within the upper limits of 5.0 and 4.5 or within the lower limits of 2.9 and 2.0.

~~With~~ William W. Farquhar and David A. Payne (1963)² selected over- and underachievers by the use of the two stage Regression model.

Individuals who varied more than 1 S.E. Est. from the first to the second administration of two different aptitude measures were eliminated from the study to control for stability unreliability. Over-achievers were defined as falling at or above 1 S.E. Est. relative to the linear regression of aptitude (Differential Aptitude Test, Verbal Reasoning sub-scale) on achievement (cumulative grade point average for academic subjects for 9th and 10th grades). Conversely, under-achievers were defined as falling 1 S.E. est. below the regression line. Regression equations were developed separately for each sex for each of the schools.

Frochlich and Mayo (1963)³ have mentioned that criterion groups of under and overachievers have usually been isolated by a combination of scores above and below the mean on an ability measure and an achievement measure.

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1. L. Carmical : Characteristics of Achievers and Under-achievers of a large senior high school, Personnel & Guidance Journal, Vol. XLIII, No. 4 (Dec. 1964), pp. 350-355
 2. W.W. Farquhar & Payne, D.A. : Factors in the Academic-occupational Motivations of Eleventh Grade Under & Over-Achievers, Personnel Guidance Journal, Vol. XLII, No. 2, (Sept. 1963).
 3. H.F. Frochlich & G.D. Mayo : Under and Over-Achievement Measurement, Personnel and Guidance Journal, Vol. XLII, No. 7, (March 1963), pp. 445-450.

An index based on the ratio of an actual grade to that predicted from an ability measure has also been used (here called the achievement index), as has a score indicating the difference between predicted and actual grades.

In the study done by Knight and Chansky,¹ Over-achievers', grade placement score exceeded two standard errors of measurement above anticipated grade placement; Under-achievers' grade placement exceeded minus two standard errors of measurement of anticipated grade placement.

One approach to identify Over- and Under-Achievers is to use the index of achievement by obtaining the ratio of T- score on intelligence.² According to this if the index of achievement indicated by the above ratio is less than the mean of such indices minus 1.96 SEM, the case is considered to be that of underachievement.

However, many American researchers accept the concept of underachievement as the low scholastic performance of high ability students, thus excluding the average or below average from this class of students. In a recent study Perkins (1965)³ a pupil was considered to be an underachiever if his average I.Q. was 114 or more and if the point corresponding to his average I.Q. and his GPA fell at least one standard error of estimate below the regression line for his class room.

1. James Knight : Anxiety, study problems and Achievement', Personnel and Guidance Journal, Vol. XLIII, No. 1, (Sept. 1964).
2. J.N. Joshi and Ramia Sharma : "Role of Non-intellectual Factors in Underachievement". M. Ed. dissertation, Panjab University, (1967).
3. H.V. Perkins : Class room Behaviour and Under-achievement American Educational Research Journal, 2, No. 1, (Jan. '65), Pp. 1-12.

Davis (1964)¹ has suggested that a crude estimate of underachievement or over-achievement may be obtained by taking the difference between comparable scores on an achievement test and on an appropriate aptitude or mental ability test and by comparing it with the smallest difference significant at a designated level of probability, the difference is to be calculated in terms of stanine scores.

Shaw and Mc Cuen (1960)² used a central tendency split technique. 'Under-achievers were determined by selecting (a) individuals who had earned a grade-point-average that was below the class mean, but who were (b) in top 25 % of the class in ability on intelligence scale. Over-achievers were not studied. It was assumed that reversing the above procedure over-achievers could be obtained.'

Shaw and Brown (1957)³ and Grubb (1958)⁴ used the Arbitrary Partitions-Middle group eliminated technique but only studied the upper quartile in ability.

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1. B.F.Davis : Educational Measurement and their Interpretation, Belmont California Wadsworth Publishing Co., Inc. (1964), pp. 253-262.
 2. M.C.Shaw & J.T.McCuen : The onset of academic under-achievement in bright children. Journal of Educational Psychology, 51, (1960), pp. 103-108.
 3. M.C.Shaw & D.J.Brown : Scholastic Under-achievement of bright college students. Personnel & Guidance Journal, 36, (1957), pp. 195-199.
 4. M.C.Shaw & J.Grubb : Hostility and able high school under-achievers, J. Counsel. Psychology, 5, (1958), pp. 263-268.

Winberg (1947)¹, Drews and Tehan (1957)² and Brookover (1962)³ used both high and low ability groups.

Winberg classified, Under-Over and Normal achievers as follows:

(a) Cumulative grade-point average and ACE total scores were obtained on a college freshman class (b) Underachievers were designated as those individuals who had ACE total scores at or above 100, but whose GPA's were below 2.00. (c) Over-achievers conversely, were identified as having ACE's of 120 and below, but whose GPA were above 2.60, (d) a third sample, "normals", was obtained by designating their ACE's to be 130 or above and having a GPA of 2.60 or above.

Frankel (1960)⁴, too, used a parallel method to study under-achievement.

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1. W.A. Winberg : Some personality traits of collegiate under-achievers. Proc. Iowa Acad. Sci., 54, (1947), 267-270 in W.W. Farquhar and D.A. Payne; A classification and Comparison of Techniques used in Selecting Under-and Over- Achievers. Personnel & guidance Journal (May 1964).
 2. M.E.Drews & J.E.Tehan : Parental Attitudes and academic achievement. J. Clin. Psychol., 13, (1957), pp. 328-332.
 3. W.B.Brookover : Self-Concept of ability and school achievement. Final report, USOE, Cooperative Research Project, Michigan State University, (1962).
 4. E.Frankel : A Comparative study of achieving and under-achieving high school boys of high intellectual ability., Journal of Educational Research, 53, (1960), pp. 172-180.

Brookover (1962)¹, has reported an approach taking into consideration the reliability of dependent and independent variables. It involves; (a) determination of mean raw scores for GPA's and aptitude predictory, (b) calculating internal consistency reliability estimates of the aptitude predictor from the test manual, (c) calculation of standard errors of measurement (d) elimination of subjects falling within an S.E. of measurement about the mean on either variable. Brookover reports grade-point average reliability estimates of 0.91 for males and 0.93 for females on a seventh grade group.

Many studies have been carried out using Relative Discrepancy splits techniques (Baymur & Patterson,² Diener,³ Duff & Siegel,⁴ Mc Quarry & Traux,⁵ and Mitchell).⁶ Diener's method involves converting aptitude and GPA in "T" scores. The discrepant groups are then defined on the basis of a difference of rank, plus and minus 15 "T" score units.

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1. Brookover : Op. cit.
 2. F.B.Baymur & O.H.Paterson : A comparison of three methods of assisting under-achieving high school students. J. Counsel Psychol., 7, (1960), pp. 85-89.
 3. O.L.Diener : similarities and differences between Over-achieving and under-achieving students. Personnel & Guidance Journal, 38, (1960), pp. 396-400.
 4. O.L.Duff & L.Siegel : Biographical factors associated with academic Over- and Under-achievement. J. Educ.Psychol. 51, 1, (1960), 43-46.
 5. J.J.McQuarry & W.E.Traux : An under-achievement scale, Journal of Educational Research 48, (1955) 393-399.
 6. J.V.Mitchell Jr. : Goal setting behaviour as a function of self acceptance, over- and under-achievement and related personality variables. J. educ., Psychol., (1959). 93-104.

Technique that approximates regression model is described by Gerberich (1941).¹ The method involved the "smoothing" of a scatter diagram of achievement predicted from aptitude measures. Students who deviated more than one standard deviation from the smoothed means in opposite direction were included in the experimental groups. An under-achieving group had above-smoothed-mean intelligence scores but below mean scholarship. Conversely, the Over-achieving group had below-mean intelligence scores but above mean scholarship, within above variability limits.

Krug's² technique reported by Gebhart and Hoyt (1958)³ involves: (a) Predictions of GPA from aptitude measure, (b) division of predicted GPA's into three group (high, average, low) using arbitrary cutting points based on a fraction of the S.D. of GPA, (c) determination of discrepant achievers by contrasting actual and predicted GPA's in each of the three ability groups, (d) selection of a percentage of the most discrepant individuals for each achievement classification (under-Overs) for each ability level.

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1. R. Gerberich : Factors related to the college achievement of high-aptitude students who fail of expectation and low-aptitude students who exceed expectation. J. educ. Psychol., 32, (1941), pp. 253-255.
 2. R. E. Krug : Over- and Under-achievement and the Edwards PPS. J. experimental and Appl. psychol., 2, (1959), pp. 133-136.
 3. G. O. Gebhart & D. T. Hoyt : Personality needs of Under- and Over-achieving freshmen. J. appl. psychol., #2, (1959), pp. 125-128.

Farquhar and Payne¹ have concluded that '..... there appears to be little or no agreement among techniques with which an individual finally is designated as a discrepant achiever.

Disagreement in findings between studies based on various discrepant achiever sample selection techniques should at this point cause little concern, for uniqueness of the sample of study alone may account for the contradictions.

Investigators must report their operational procedures in ~~at~~ selecting under- and over-achievers if their designs are to be intelligently interpreted'.

Pippert and Archer (1963)² compared two methods for classifying under-achievers.

One method uses essentially a grade point average (GPA) as the criterion of achievement. Students averaging below some predetermined expected GPA are classified as underachievers.

The second employs an achievement test score as the criterion of achievement. If a student of a given intellectual ability does not achieve above a reasonable cutoff points, he is classified as an underachiever.

1.W.W. Farquhar & : 874-888.
D.A. Payne

2.Ralph Pippert & : A Comparison of two Methods for
N.Sidney Archer : classifying Underachievers, Personnel and Guidance Journal, Vol.XLI, No.9, (May 1963).

The Otis Quick scoring Beta-Test of mental ability and Iowa Test of Educational Development (ITED) were used. The populational consisted of 126 ninth grade students who scored 110 or above on the otis.

14 boys and 7 girls, were found as underachievers by GPA; 7 boys and 12 girls, as underachievers by achievement test scores; and only two boys were identified by both methods- Those students not chosen by either method were used as a reference group.

More boys than girls were selected as under-achievers by GPA; but interestingly, this was reversed with under-achievers by achievement test when more girls were so identified. It was suggested that both the groups be called under-achievers.

Edington (1964)¹ advocated for a normative approach to measurement of Underachievement. He has described accomplishment quotient (AQ), to be, possibly, the best - known measure of underachievement. $A.A. = EA/MA$. 'The average AQ for students with high M.A.'s usually is low, compared to the average AQ for students with low MA's. This variation in the average AQ as a function of the size of the M.A. is a statistical necessity deriving from the regression effect and has no empirical significance.

1. Eugene G. Edington ; A Normative Approach to measurement of Underachievement, *Journal of Exptl. Edu.*, Vol.33, No.2 (Winter 1964), pp. 197-199.

The regression accomplishment quotient (RAQ) was designed to eliminate the regression effect by using the EA estimated from the regression of EA on MA instead of the M.A. $RAQ = EA / EA \text{ (est.)}$ This revision of the accomplishment quotient allows the average value of the quotient to be statistically independent of the size of the MA.

Neither AQ nor RA provided a meaningful indication of the magnitude of the underachievement. Good enough's ² standard error of estimate approach, on the other hand, can express the magnitude of underachievement in terms of the rareness of a given degree of under achievement. The obtained deviation of EA from the estimated EA is divided by the standard error of estimate for predicting EA's from MA's to provide a standard score measure of underachievement. Reference to normal curve tables then permits determination of the probability of a chance deviation of such magnitude.

F.L. Good enough : Mental Testing, (New York: Rinehart, (1949), p. 335.

The normative approach to underachievement can, like the standard error of estimate approach, provide quantitative statements regarding the 'rareness of a given degree of underachievement.'

The method consists of establishing percentile norms for under-achievement for any given level of mental ability, the percentile of students with lower than a specified level of achievement can be directly obtained from table of percentile norms. The percentile norms table can provide percentile ranks that can be used either for determining the extent of underachievement of a particular student or for comparing groups of students with respect to underachievement. The method involves:

(a) Arranging mental test scores of subjects in order from low to high and making a distribution of the achievement test scores of students possessing the lowest mental test score.

(b) Then, making a distribution of achievement test scores for students having the next higher mental test score, and so on, making up separate distribution of achievement test scores for each mental test score scored lower than any specified achievement test score), for each separate distribution of achievement test score, and combining percentile norms for the different mental test scores into one table.

It has an advantage over the standard error of estimate approach in being a nonparametric technique because it uses empirical probabilities.

Farquhar and Payne (1964)¹, grouped the techniques for classification of under-and over achievers into four some what distinct categories:

1. Central tendency Splits.

'Under- and over-achievement is determined by dichotomizing a distribution of combined aptitude and achievement measures.

II. Arbitrary Partitions-Middle Group Eliminated.

'Discrepancies are determined by contrasting extreme groups in achievement-aptitude distributions, and by eliminating a middle group'.

III. Relative Discrepancy Splits

'Grade-point average and aptitude predictors are ranked independently. Under-and Over- achievement is determined by the discrepancy between the two ranks'.

IV. Regression Model Selection

'A regression equation is used to predict achievement from aptitude measures. Under- and Over-achievement is then determined on the basis of the discrepancy between predicted and actual achievement'.

1. W.W.Farquhar and David A. Payne : A Classification and Comparison of Techniques used in selecting Under- and Over- Achievers - Personnel and Guidance Journal, Vol. II, No.9, (May 1964), pp. 874-884.

(II) REVIEW OF STUDIES RELATED WITH STUDENTS' PROBLEMS

Jenson (1958)¹ obtained that barring aside a few exceptions there was a general tendency throughout the study for non-achievers of low scholastic ability to encounter more adjustment problems than other students with whom they were compared.

In India the most extensive study on a sample of 1760 Bombay University students was done on students with a purpose to understand students' problems by the world Brotherhood (1960)². The study was a survey of certain attitudes and opinions and personality traits. It aimed to bring into light some problems which our student community is faced with. It also indicates some of the sources of the students' worries and anxieties with their studies. Mental health problems of students and their sources have also been dealt with.

1. V.H.Jenson : Influence of personality traits on academic success, Personnel Guidance Journal, (1958), pp. 497-500.

2. World Brotherhood, "Report on a Survey of the Aptitudes, Opinions and Personality Traits of a sample of 1706 students of the University of Bombay", Orient Longmans, Bombay, (1960).

The Education Department of the University of Allahabad (1962)¹ conducted a study "Problems of students in Allahabad University."

The sample consisted of 175 students. Married-37, Unmarried - 138; Male 136 - Female 39; 21 years and above -57, Below 21 years- 118; Graduates-68, Post-graduates- 107.

Problem Checklist devised by the Committee on Research Problems of the All-India Vocational and Educational Guidance Association was used with some more questions added to it in order to broaden the coverage of problems. The Check list had ten problem areas.

RESULTS:

1. Study Problems:

Forty per cent of the students expressed problem in the study area "I do not know proper methods of study".

2. Problems in choosing courses of study:

Sixty five per cent expressed that they could not select the subject for their study.

3. Problems Relating to Sex Information and Marriage:

Sex information and information about "Boy-girl relationships" is very much lacking among the students.

1. Department of Education: Problems of Students in Allahabad University. Allahabad University, (1962).

Forty seven per cent of the married students checked "I do not have sufficient information about matters of sex". Forty per cent of the subjects expressed that much of their time is spent in "thinking about members of the opposite sex."

4. Personal Problem-Social, Emotional, Adjustment:

47 per cent of the subjects checked "I am easily influenced by other people". 44 per cent checked, "I have more difficulty in forgetting my mistakes than I believe I should have", 43 per cent expressed that they were mentally weaker than their class-mates" and 39 per cent checked "I have difficulty in controlling my temper".

5. Choice of Future Career:

54 per cent responded to the item, "I worry too much about what my future will be after I have finished my studies."

6. Financial Problem:

Only 39 per cent of the students participating in the study checked the item, "I always need financial help".

7. Problems Involving Religious Beliefs:

Fifty three per cent of the subjects expressed that they would like to talk about religion with some one.

8. Problems Involving Parents:

Forty per cent responded to the item, "I do not feel free to discuss my problems with my parents."

9. Problems of Achievement in School Work:

Thirty two per cent of the students felt that they were not able to do well "because many of my professors do not know how to teach their subjects". Nervousness while taking examination was another problem for 43 per cent of students.

10. Health Problems:

Thirty nine per cent checked the item " I do not get a proper diet".

Who helps students solve their problem ? 54 per cent students named parents or guardians; 13 per cent professors or teachers; 13 per cent other students; 5 per cent other adults; 1 per cent other college officers; zero per cent Psychologists or guidance officers.

Riddle (1962)¹ investigated the problems of Indian College students. The purpose of the study was simply to survey on a wide scale the problems of college students throughout India. Total sample consisted of 3,096 male and female students from Arts and Science faculties from Intermediate to Postgraduate. A problem checklist was constructed and used for the purpose.

Men students of twenty years of age or younger, living in hostels, indicated that they had more problems on the average than other groups. Students having the least problems were younger women students living at home or in the hostels.

1. C.W.Riddle : "The Problems of Indian College Students".
Journal of Vocational and Educational
Guidance, Vol.8, No.4, (May 1962).

The younger men students living at home felt, in greater proportion than other men students, that they could not do as well in their studies as they are expected to do. The younger men students were also concerned with knowing how to make friends among the opposite sex.

The younger men students living in hostels were more likely to have difficulty in knowing how to study or in getting the books they need for study.

Among the women students, older ones living at home have the most problems. These problems centre round the inability to read fast enough to complete their studies on time and not knowing how to study.

Most of the students indicated that they were receiving help in solving their problems from one source or another. Of the men 56 per cent marked they were receiving "much help" from their parents or guardians as compared with 67 per cent of the women. Only 19 per cent of the men and 22 per cent of the women reported receiving "much help" from their professors or teachers; and 39 per cent of the men and 27 per cent of the women reported "little help" received from their professors or teachers. Only 14 per cent of the men and 12 per cent of the women reported "little help" received from parents or guardians.

J.A. Bailey and R.M.V. Robertson (1964)¹ studied eight constellations of pupil-problem areas (Home;

1. J.A. Bailey and R.M.V. Robertson

'Students' and Teachers' Perception of students Problems'.
Personnel guidance Journal,
Vol. XLIII, No.2, (1964), pp.171-173

Both the measures are essentially check lists each of which classifies the problems listed into a number of areas.

Ability grouped junior high school pupils were found to report fewer on the "Looking Ahead" (relating to choosing a career, going to college, and finding a job etc.) scale of the HRA youth Inventory than comparable pupils in random grouped classes.

On the "Getting along with others scale", average pupils in the ability grouped classes at the elementary level have more social adjustment problems than comparable random grouped pupils.

Comparisons between the treatments on the "Boy meets Girl" scale showed eight statistically significant differences and one difference approaching significance. It is concluded that there is a consistent tendency for junior high school pupils in random grouped classes to report greater number of problems relating to dating, sex information, and sex mores than comparable pupils in ability grouped classes.

Results on the "Basic Difficulty Key" of the youth Inventory suggest that if any significant between-treatment difference in pupil adjustment was present, this difference favoured the ability grouping system.

Mitra and Khattri (1965)¹ studied college students' problems by using projective techniques, sentence

1. Shih K. Mitra : "Understanding College Students' Problem," Indian Psychological Review Vol. II, No. 1, (1965), pp. 19-28.

Completion and Thematic Apperception Test. In some cases Word Association, Draw-a-Person and Rorschach have also been used. Intelligence and reasoning tests were used wherever necessary. About 60 per cent of the total number of cases registered were analysed in terms of the student case analysis form. Following kinds of manifest problems were registered. Study problems 32.5 per cent; Indecision 16 per cent; Anxiety and vague feelings 12.5 per cent Physical problems 10 per cent; Interpersonal problems 9 per cent; Sexual and Marital problems 7.5 per cent; Vocational problems 7 per cent. The study contained the clinical presentation of a case also in the context of ego - psychological approach and the conceptual model which governed the counsellor's approach to understanding of problems of students.

^u Saundefur and Jeanette (1966)¹ investigated the relationship between recognized problems of Adolescents and School Achievement. The purpose of this study was to provide statistical evidence to support the assumption that adolescents have personal and social problems which affect their school achievement. 217 eighth and ninth grade students from Shawnee Mission Public school, Kansas were administered the Mooney Problem Checklist, Junior High school Form containing 210 items, 30 in seven areas, and SRA Achievement series. Coefficient of correlation between the seven areas and composite score of the Mooney and the ten subtest scores of the SRA were computed. Following conclusions emerged out of the study.

1. J.T.Saundefur and; An Investigation of the Relationship Between Recognized problems of Adolescents And school Achievement. Journal of Educational Research, Vol.59, No. 10, (July-Aug. 1966).

(a) The number of school related problems sensed by the students relates inversely to his school achievement.

(b) The number of home and family problems sensed by the students relates inversely to his school achievement.

(c) At the junior high school age, problems related to boy-girl relations do not significantly affect achievement.

(d) The number of social and personal problems sensed by the students in all areas relates inversely to school achievement.

De gena (1966)¹ has also studied the problems of Consistent Over-, Under- and Normal-Achieving College students, using the Mooney's Problem Checklist. 42 Consistent Over-, Under- and Normal-achievers were selected. The groups were matched on age, sex, race, term in College, identical courses taken, residence for first three terms in University housing, predicted grade point average, minimum deviation from predicted average of at least one probable error of estimation. .6130 (over-and under achievers), consistency of over-, Under- and normal-achievement (maximum deviation of cumulative average from predicted average of .2 of a grade point) over a three-term period.

Results obtained from the data suggested that over-achievers showed more concern in the area of Finances, Living conditions, and Employment, than did under-achievers. Over-achievers also seemed more concerned

1. P.A.De gena : Problems of Consistent Over-, Under- and Normal-Achieving College Students as Identified by the Mooney Problem Checklist-Jour. of Educ. Res. Vol.59, No. 3, April (1966).

about the future-vocational and Educational, than did normal achievers. In the area of Social-psychological Relations, Over-achievers revealed more problems than either normal or under-achievers.

The item analysis revealed that 15 out of sixty five prevalent problems were found to lie in the area of Adjustment to College work. In descending order the problems were 11 from SRA; 8 SPR; 6 the future-vocational and Educational and PPR; 5 CSM; 4 HPD and 3 from MR and GTP.

Bureau of Educational and Vocational Guidance, Education Directorate, Government of Tripura, Agartala¹ conducted a study on 'College students' Problem in Tripura' during the year 1966-67.

The sample consisted of 451 students (roughly 16 per cent of the student population in non professional degree colleges in Tripura).

The instrument employed was the translated version of the questionnaire constructed by the All India Educational and Vocational Guidance Association. The instrument consisted of two parts. The first part consisted of 40 items covering problems dealing with study, choice of ~~average~~ courses and careers, sex information and marriage, emotional and health adjustment etc. The second part of the questionnaire contained a list of persons from whom the students might receive help.

1. Bureau of Educational & Vocational Guidance
Education Directorate,
Tripura. 'College students' Problems
in Tripura' Educational
Miscellany, Vol.IV.No. 1 & 2,
(Jan-Sept. 67).

RESULTS:-

It appeared that the boys marked more problems than the girls. Among the problems considered most troublesome by students, the problems concerning their study turned out to be quite prominent. Eighty four per cent of students indicated that they were not doing as well in their studies as others expect them to do. The need for private tuition has been expressed by as many as 80 per cent of students. Students also expressed the problem of getting the books they want. The male students indicated that they were more troubled of the feeling that they were not fast readers so as to complete their studies in time, than were the female students.

'I do not know proper methods of study' ranked fifth among the seventeen most frequently reported problems. Sixty per cent of the students have reported not to be doing well with their studies due to their poor health. Besides these, female students expressed much concern over their nervousness at the time of examination.

Male students appeared to be more troubled by the problem that they do not have sufficient information regarding the qualifications, abilities and aptitudes needed for different kinds of work or careers than female students.

Subjects have also expressed lack of knowledge on matters of sex and their inability to make friends with opposite-sex. Problems of finance vex them too.

Greatest help was made available to these subjects from parents and guardians and least from college.

S.N. Rao (1967),¹ investigated 'Adjustment problems of College students'.

One college in each district under the jurisdiction of S.V. University, Tirupati, was selected for drawing the sample numbering 2,338 students in professional and non-professional courses representing roughly 50 per cent of the population. The subjects ranged between 17-21 years of age.

Mooney problem checklist (adapted), covering ten areas (Academic adjustment; Personal adjustment; Economic and Living conditions; Vocational plans; Health and physical conditions; social relations; Parents and home; Recreational activities; Moral and religion and sex and marriage) through 275 items was used.

The B.A., B.Sc. and B.Com. students reported generally greater number of problems than students in the professional group with the exception of B.V.Sc. subjects.

'Parents expecting too much of me' was checked by the largest number of students in the whole group (46.66 per cent). Next in the rank order is 'Family worried about finances' and third is 'Afraid of making mistakes', followed in order of rank by 'worrying about examination'; 'Trouble in preparing for examination' 'Difficult to concentrate'; 'Not knowing how to study'; 'Too many financial problems'; 'Parents sacrificing too much for me' and 'Can't forget a mistake I have made'.

1. S.N. Rao : "Adjustment Problems of College Students" Journal of Vocational and Educational Guidance Vol. 13, No. 2 & 3, (May-Aug. 1967), p. 82.

Among the 25 major problems reported by over 25 per cent of students academic problems account for nearly half the number. The non-professional group of subjects rank Vocational problems third, while this does not seem to be important for the professionals.

Most of the problems checked are also underlined, among them problems concerning finance, adjustment to academic work, concern over future employment figure prominently.

S.P.Ahluwalia & Nirmaljit Sidhu (1968-69)¹ investigated personal problems of some Adolescent Girls and their effect on academic achievement. The aim of the study was (1) to identify the pattern of the personal problems of adolescent girls (ii) to assess how these personal problems affect the academic achievement of the selected group of adolescent girls. The sample: 260 girl students of class IX, age-group 13 to 18 years.

TOOLS:-

A problem checklist was devised on the pattern of Mooney Problem Check List, having 137 problems grouped into five problem areas: Family; society; Health; Emotional and School.

CONCLUSIONS:

(1) Adolescent girls appear to have a variety of problems which represent a variety of areas. The problems seem to be alike but their number and incidence may decidedly be different.

1. S.P.Ahluwalia & : " A Study of personal Problems of some Adolescent Girls and their effect on Academic Achievement", A Research Journal of Educational Psychology, Vol.II, No-4,5,6, (1968-69).

(II) Different age group among adolescent girls have almost similar personal problems, though their number and incidence may vary.

(III) Most of the personal problems of the adolescent girls are linked with school life and social set-up.

(IV) Majority of the adolescent girls have common problems. There is more similarity and less difference among the personal problems of the subjects studied.

(V) The number of problems does have an adverse effect on the academic achievement of the students, though this cannot be considered as significant. Emotional problems appear to have some significant influence on the academic achievement.

(VI) It can be said that good achievers have fewer problems than the poor ones.

(III) DIFFERENT VARIABLES CONNECTED WITH UNDER-AND OVER-ACHIEVEMENT

Merville C. Shaw and Gerald J. Alves (1963)¹ studied the self-concept of Bright Academic under-achievers. A student was classified as an achiever if his grade-point average in all previous high school work was 3.0 or above, or as an underachiever if his grade-point average was 2.5 or below. Several consideration entered into selection of these cut-off points. It was considered desirable to meet two criteria for statistical purposes. One criterion was that overlapping distributions should be avoided. The other was that it should be possible to demonstrate a statistically significant difference between achiever and under-achiever groups with respect to grade-point average.

1. Merville C. Shaw & Gerald J. Alves : The Self-Concept of Bright Academic Underachievers; Personnel & Guidance Journal, Vol. XLIII No. 4, (Dec. 1963), pp. 401-403.

A third, and more subjective, consideration was also taken into account. It was assumed that an individual whose predicted academic performance placed him in the top 25 % of the population and who actually performed at that level could be called an achiever conversely, it was assumed that an individual whose predicted performance placed him in the top 25 %, but whose actual performance over a significant period of time indicated that he was in the lower 50 % of the population could be called an underachiever. The choosen out-off points reflected the two statistical criteria and roughly reflect the assumption with respect to expected as opposed to actual performance.

Tools: Bille Index of Adjustment and χ^2 values.

Sample: Initial 129, final 78 students.

RESULTS

Male under-achievers had more negative self-concepts than male achievers. In addition, male underachievers reported themselves as being less self-accepting and attributed a similar lack of self-acceptance to others.

The study tends to point strongly to a direct association between negative self-attitudes and academic achievement, when ability levels are equal.

G.F.Comb (1964)¹ studied the perception of self and scholastic underachievement in the academically capable. This study explored differences in the

1. Charles F. Comb : Perception of self and Scholastic Underachievement in the Academically Capable. Personnel and Guidance Journal, (Sept. 1964), Vol. XLIII, No. 7, p. 47.

ways that under-achievers and achievers perceive themselves and their relationships to the world around them. Achiever and underachiever groups, each consisting of 25 high school junior boys who were 115 IQ or better, were administered an apperceptive device. Protocols were analysed in terms of six continua of perception. The statistical analysis utilizing 't' and 'F' tests (with a predetermined 5 percent Alpha level) demonstrated vary significant differences between the groups. Under-achievers showed significant and consistent differences from achievers in that they:

- (a) Saw themselves as less adequate,
- (b) Saw themselves as less acceptable to others,
- (c) Saw their peers as less acceptable,
- (d) Saw adults as less acceptable,
- (e) Showed an inefficient and less effective approach to problems,
- (f) Showed less freedom and adequacy of emotional expressions.

Suggestions are made of certain factors that may produce underachievement and certain possible directions for future research.

P.A.De Sena (1964)¹ made a study of the role of consistency in identifying characteristics of three levels of Achievement. Non intellectual factors were identified which characterised consistent over-, under- and normal-achievers as individual groups and which significantly distinguished them from each other.

1. Paul A.De Sena: The Role of consistency in Identifying Characteristics of three levels of Achievement. Personnel Guidance Journal, Vol. XLIII, No. 2, (Oct. 1964), pp. 145-149.

From a total of 1,061 freshman male students enrolled in science curriculums at the Pennsylvania State University, three groups of 42 consistent over-, Under-, and normal-achievers were matched with a high degree of accuracy on such variables as predicted grade point average, minimum deviation from predicted average, and consistency of over-, under-, and normal-achievement over a three-term period. The eight instruments utilized were completed by the population several days prior to their first term as sophomore students.

It is concluded that : (a) common non-intellectual factors in the areas of interests, personality, problems, values, personal background, and academic and social adjustment to college can be identified which characterize, over-, under- and normal-achievers as individual groups and which significantly distinguish them from each other; (b) Neglect of the consistency factor may have been responsible for the failure of standardized instruments in previous studies to discriminate among achievement groups.

A.K.Srivastava (1966)¹ investigated factors related with educational underachievement. Initial sample was 1837 from nine different schools. Four groups of 150 each Under-, Over-, High- and Low-Achievers were obtained. Verbal and Non Verbal Tests of Intelligence and average examination marks spread over six consecutive examinations were used as predictor and criterion variables.

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1. A.K.Srivastava: "An Investigation into the Factors Related to Educational Under-Achievement. Unpublished doctoral thesis, Patna University, (1966).

The Over-achievers were operationally defined as those who were in the top 27 % in achievement but were below the average in ability, the reverse category made up the underachievers. Achievers were defined as those who were in top 27 % on both these variables. The variables on which these groups were compared, include study habit, reading ability, academic motivation, personality and a large number of background factors.

Following tools were used to investigate the problem: Bell's Adjustment Inventory, Maslow's Security-Insecurity test; Problem Checklist; Wrenn's Study-Habit Inventory; an academic motivation inventory; Vocabulary test; spelling test; Hindi reading speed test and a personal data sheet.

RESULTS:

Under-achievement is significantly related to the following factors;

- (a) Poor study habit;
 - (b) Poor reading-ability, which includes poor reading speed, poor strength of vocabulary and poor knowledge of spelling;
 - (c) Poor academic-motivation, which includes poor self-concept of ability, and less importance attached to academic achievement;
 - (d) Poor general adjustment, which includes poor home, health, social and emotional adjustment;
 - (e) Feeling of insecurity;
 - (f) Having larger number of problems related to family, school, economic condition and recreation.
- (B) Underachievement is significantly related to the following background factors:

(a) Being older in age;

(b) Physical aspects of the home environment, like lower socio-economic background, fathers mostly belonging to non-service class of profession, large family size, larger number of brothers and sisters, and middle born in birth order;

(c) Non-participation in games and sports;

(d) Reading interests confined to text books only;

(e) Poor health;

(f) Devoting less time to studies;

(g) Failures in school examination;

(h) Receiving rewards for non-academic excellence;

(i) Lower educational and vocational plans;

Under-achievement is not related significantly to the following background factors.

Interests of parental structure; Hobbies;

Membership of organisation outside the school;

Membership of organisation inside the school;

Interests in games and sports; Interest in music and
and Attitude towards school.

The study shows relationship and does not attempt to give causes of under-achievement.

Vishnoi (1969)¹ investigated anxiety in relation to Over-, and Under-achievers. sample consisted of 18 under, and 19 Over achievers (girls). The Under- and Over- achievers were obtained on Intelligence Test score (Joshi's Test of Mental Ability) and examination marks. Those who were in the top 25 %

1. Kusum Lata Vishnoi: (1969); "A Study of Anxiety in Relation to Over-, and Under-achievers", M.Ed. dissertation, Allahabad University, (1969).

Sinha's anxiety scale was used as a measure of anxiety. The groups of Over and Under-achievers differed on anxiety ^{mean} ~~mean~~ ~~index~~ in a non-significant way. Mean of Under-achievers was higher. Relationships between Anxiety and Achievement and between Intelligence and Achievement were found to be .41 and .34 respectively.

Rama Dutta(1969)¹ investigated "Study Habits of Under-, and Over-Achievers". The Under-and Over-Achievers were obtained on the criteria similar to Vishnoi² - i.e. discrepancy between top-bottom groups on Intelligence scores and Achievement marks. The screening was done on an initial sample of 200 girl students. An adhoc study-Habit Inventory and Joshi's Test of mental ability were used. Examination marks were taken as criterion variable.

For the total sample between Intelligence and Achievement = .35; between Achievement and Study-Habit = .22 and Intelligence and study habits = .16.

1. Rama Dutta, "Study Habits of Under-, and Over-achievers". M.Ed. dissertation, Allahabad University, (1969).

2. Kusum Lata : Op. cit.1.
Vishnoi

Among Overachievers r between Intelligence and Achievement = .21; Intelligence and Study-habits = .04; Achievement and Study habits = .39.

Among Under-Achievers r between Intelligence and Achievement = .33; Intelligence and Study Habit = .11 and Achievement and Study Habit = .05.

Differences between means are significant (for Over- and Under-Achieving group of students on Intelligence, Achievement and in one area of the study-habit i.e. Attitude towards examination and general habits of work) beyond .05 level of confidence.

(IV) INDIAN STUDIES CONNECTED WITH ACHIEVEMENT:

Januar (1961)¹ observed that among different dimensions of adjustment, home, emotional and social were important. Personality adjustment and introversion were found to be influencing academic-achievement independent of intelligence.

B.N.K.Singh (1965)² investigated some of the non-intellectual correlates of academic achievement of undergraduate college students-self-concept of

1. K.K.Januar : Personality and Achievement, Psychological Studies, 6, No.2, (1961).

2. B.N.K.Singh : Some Non-Intellectual Correlates of Academic Achievement. Doctoral thesis, Patna University, (1965).

academic ability; Ascendance; Anxiety; Restraint; Thoughtfulness; Home, Health and Social Adjustment; n Ach.; Friendliness; Extraversion; Neuroticism and Insecurity- Father's education; Occupation; Income; Students' participation in extra-curricular activities etc. were probed into.

Statistically significant relationship of Academic Achievement was found with Mental Ability (non-verbal -SPM), Self concept of academic ability and motivation, father's education and occupation. Significant inverse relationship was found with urbanisation. Other scales were either positively or negatively related.

D.Gopal Rao (1968)¹ found that income, education and occupation of parents were related to pupil's intelligence. Correlation between study-habits and scholastic achievement was reported to be low. Between study-habits and school attitudes, and school attitudes and scholastic achievement the relationship was positive. Socio-economic status bore substantial relationship with achievement and high with Intelligence.

S.B.Singh (1968)² found low positive correlation between Intelligence and Academic achievement; positive significant relationship between Academic-achievement and study-habits (SSHA). Correlation coefficients between Intelligence and different subjects of study and

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1. D.Gopal Rao : 'A study of Some Factors Related to Scholastic Achievement', Doctoral thesis, Delhi University, (1968). Reported in C.I.E. Studies in Education and Psychology, Publication No.61 (NOERAT).
 2. S.B.Singh : 'A study of Academic Achievement of I year Science Students in Relation to their Intelligence and study-habits'. M.Ed. dissertation, B.H.U., (1968).

between study-habits and different subjects were found to be positive and significant except for Hindi and study-habits.

R.P.Bhatnagar (1968)¹ found that eleven out of fifteen personality needs (EPPS) were significantly correlated with academic achievement-intelligence partialled out. n. Ach., n. Aut., n. Int., n. Soc., n. Dom., n. Nur., n. End., n. Aff., and n. Aba., were negatively correlated.

HIGH AND LOW ACHIEVEMENT.

Jamuar (1958)² investigated differences in study-habits of high and low-achieving college students. A significant correlation of .51, $P = .01$ between study habits and achievement was obtained.

Muthayya (1962)³ did not differentiate the high or low-achievers either on intelligence or level of aspiration.

Muthayya (1962)⁴ found that High-achievers were marked for being more extra-punitive and Low-achievers were impunitive. High and Low-achievers differed significantly on impunitive reaction and n. Ach.

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1. R.P.Bhatnagar : "A study of some of the Personality Factors as predictors of Academic Achievement, Doctoral thesis, Delhi University, (1968), reported in C.I.E. studies in Education and Psychology, Publication No. 63, (NORRAT).
 2. K.K.Jamuar : "Study-habits and achievement" Psychological studies, 3, No. 1, (1958).
 3. B.C.Muthayya : "Level of Aspiration and Intelligence of High-achievers and low-achievers in the scholastic field", Journal of psychological Research, 6, No.3, (1962).
 4. _____ : "Frustration reaction and Achievement motive of high-achievers and low-achievers in the scholastic field" Journal of Psychological Research, (1964).

Tandon et. al (68-69)¹ studied self-concept of High and Low-achievers. Generally the High-achievers obtained more score both in real and ideal selves in comparison to low-achievers but the difference is not significant. Only a slight difference exists between the self-concept of high and low-achievers. There are discrepancies between the real and ideal selves of the four groups. But in the case of low-achievers no such discrepancies are visible.

HIGH AND LOW ACHIEVEMENT

D.N.Sinha (1970)² studied Academic Achievers and Non-Achievers. He discovered that High achievers were younger in age, unmarried, lived generally with their parents, belonged to science faculty and were, public govt. or convent school educated. They had lower anxiety and were more regular and systematic in their studies. They possessed superior reality-orientation and were moderate in 'Risk-taking'.

Low-achievers tended to perceive themselves in a more favourable light, had high level of aspiration and were more flexible.

High and Low-achievers did not differ with respect to their financial condition, health-status and frequency of illness.

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1. R.K.Tandon ; "A Comparative study of the self-concept of High and Low-Achievers", A Research Journal of Education and Psychology, Vol. II, No. 4, 5, 6 (1968-69).
 2. D.N.Sinha ; "Academic Achievers and Non-Achievers", United Publishers, Allahabad (1970).

The review of the related literature may be concluded as follows:

- (1) There is no agreement with regards to parameters of underachievement, definitions, techniques and tools for identifying under- and over- achievers. Results are not comparable and efforts are to continue in the direction of conceptual clarification and unfallible method.
 - (2) Student community is faced with many problems in the areas of teaching and learning; Economic and living conditions; Home and Social life. Their impact on discrepant achievement has perhaps not been much explored. To conserve and save the human resource from disutility a study of under- achievers seems imperative so that workers in the field could gain more knowledge and help in the maximum utilization of human potential.
 - (3) Correlates of Academic Achievement have been studied by many investigators. A large number of studies have ~~int~~ isolated personality, motivational, attitudinal and background factors in academic achievement. studies reported are mostly foreign and point to the need of replication of such studies on Indian sample.
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DESIGN AND PROCEDURE

CHAPTER III

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CHAPTER III DESIGN AND PROCEDURE

According to Jahoda and Cook.¹

"A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine the relevance to the research purpose with economy in procedure".

The objectives of the study were delineated in Chapter I. The methodology, the tools developed and used, the sample, the mechanics of data collection and the statistical treatment of the data have been presented in this chapter.

A. METHODOLOGY

IDENTIFICATION OF UNDER-, OVER- AND NORMAL-ACHIEVING STUDENTS.

Despite non agreement among the researchers on the parameters of Over-and Under-achievement the two concepts are the most perseverant and most frequently studied in educational research. Thorndike² has considered these phenomenon due basically to "the imperfectness of our prediction". Some ascribe it to the 'artifacts of measurement',³ while others submitted that the deviant achievement patterns are a function more of school policy than of individual pupils' characteristics (4).

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1. Selltitz, Jahoda et. al.: Research Methods in social Relations, Methuen & Co., Ltd. (1960), p. 49.
 2. R.L. Thorndike, "The Concepts of Over-and Underachievement" New York, Bureau of Publications, Teachers College, Columbia University, (1963), p. 79.
 3. W. Coleman, & E.E. Cureton: "Intelligence and Achievement The Jangle Fallacy Again," Educational & Psychological Measurement, and XIV, (1954) pp. 347-357.
 4. T.G. Kowitz, and C.M. Armstrong: "Underachievement: Concept or Artifact? School & Society, LXXXIX (1961), pp. 347-349.

With all these sceptical observations, the area has not been 'written off' from research, rather it has still more sensitised the researchers to look for more sophisticated designs and tools. Gowan¹ pointed out that there is no generally accepted standard of measuring underachievement. Although Farquahar and Payne² have suggested various method of classifying under-achievers, 'the operational definitions vary markedly depending on the universe to be sampled and the measures of ability, achievement, and discrepancy employed'.³

In the absence of unanimity on the problem of classifying under- and Over-achievers, the present study has ~~been~~ adopted cut score on the ability and achievement continuums^u separately to identify Under- and Over-achievers. The three groups of Over-, Under-, and Normal achievers have been divided on the basis of ability score (Intelligence Test) and achievement scores (examination marks). Those who were above average in ability and below it in achievement have been regarded as under-achievers, the diagonally opposite categories represented the Over-achievers.

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1. J.C.Gowan, : "Underachievement Revisited" High School Journal, XLVIII (1964), pp.117-119.
 2. W.W.Farquhar: A Classification and Comparison of
 & D.A.Payne,: Techniques used in Selecting Under-
 achievers. Personel Guid. Jour. XLII,
 No. 9, (1964), pp. 874-884.
 3. J. Paterson : "The researcher and the Under-achievers
 Never the Twain shall Meet" Phi Delta
 Kapan, XLIV (1963), pp. 379-381. In-
 Alexander Tolor: Incidence of Under-
 achievement at the High school Level-
Jour. of Edul. Res. Vol.63, No.2,
 (October,1969), p. 63.

The cases have been taken from the diagonal cells as shown below:

		Intelligence		
		(-) M (+)		
Achievement	(+)	A		+ .50 σ
	M			
	(-)		B	- .50 σ
		- .50 σ	+ .50 σ	

A = Over-Achievers

B = Under-Achievers

That is, those who were minus .5 S.D. from the class mean on the predictor variable (Intelligence Test) and plus .5 S.D. from the class mean of the criterion variable (examination marks) were considered over-achievers.

Similarly .5 S.D. above the class mean in intelligence and .5 S.D. below the class mean in achievement formed the group of under-achievers.

Those who had their achievement commensurate with their mental ability or fell in the middle belt were designated as normal-achievers.

B. TOOLS

The following tools were developed and used in this study:

I PERSONAL DATA SCHEDULE

This instrument Appendix A was designed to

collect information regarding: (a) Socio-Economic Condition (b) Health-status (c) College or University Education (d) Interests (e) Attitudes (f) Future-plans and (g) Self-concept.

Parts (a), (b), (c) and (d) sought to know information having a factual bias regarding: marital-status, male-female, rural and urban dichotomies; parents' occupation; education and income along with number of dependents; birth order; health and physical-ailments; subject areas of most and least interests; subjects in which extra-help is required; number of study hours put in and various curricular and co-curricular interests of the students.

Parts (e) and (g) involved value-judgement, whereas part (f) probed into goal-orientation among students. In part (f) ratings were obtained on five point scale to have self assessment on health, general, practical and social intelligence and power of receptivity. Besides, self-concept was also measured on twelve bipolar adjectives on eight point scale.

Tentative and preliminary drafts of the schedule were circulated among experts for criticism and suggestions. The improved form was tried out and modified for language, vagueness and understandability. The face validity was 'established' and final form was prepared.

SCORING:

Numerical weightage were assigned to most of the categories. A few items were scored on frequency and percentage basis.

II. INTERVIEW SCHEDULE FOR TEACHERS

This schedule (Appendix B) was intended for obtaining teachers' opinions on the causes of Under- and Over-, achievements. Suggestions to improve the situation were also invited. The questions in the schedule were put in a funnel sequence to elicit opinion of the teachers on seven problem-areas viz., Health and physical handicap; Academic backwardness; Social problems; Emotional problems; Family; Community and University/ College as causative factors in deviant academic behaviours of students.

III. INTERVIEW SCHEDULE FOR UNDER- AND OVER- ACHIEVERS.

This schedule (Appendix C) aimed at collecting Psycho-social data concerning the Over-, and Under-achievers. The questions put in are factual as well as opinion-biased to which the respondent presents his reaction in 'yes' or 'No'. The schedule sought to know the respondents' perception of his peers, parents and teachers' role and their expectations. Role-expectation and influence of 'significant others' is considered meaningful in increasing students' motivation for learning.

IV. MOONEY PROBLEM CHECK-LIST (HINDI ADAPTATION) (Appendix D)

Among the number of instruments devised for gathering information about the adolescents' problems 'Mooney Problem Check List' and 'SRA Inventory of youth Problems' have been frequently used with advantage. For the purpose of this study Mooney Problem Checklist (College Form)- 1950 Revision, was adapted in Hindi.

"Mooney's Problem Checklists were developed during the early 1940's to help students express their personal problems"¹ "the 1950 revisions are the result of extensive research based on large surveys, coupled with expert judgement and long experience with these instruments"². The areas which represent the problems in the Check-List are as follows:

- I. Health and Physical Development (HPD)
- II. Finances, Living conditions and Employment (FLE)
- III. Social and Recreational Activities (SRA).
- IV. Social-Psychological Relations (SPR).
- V. Personal-Psychological Relations (PPR).
- VI. Courtship, Sex and Marriage (OSM).
- VII. Home and Family (HF).
- VIII. Morals and Religion (MR).
- IX. Adjustment to College (School) work (ACW)(ASW).
- X. The Future: Vocational and Educational (FVE)
- XI. Curriculum and Teaching Procedure (CTP).

The Check-list is self-administering. It is scored with the help of eleven stencils.

HINDI ADAPTATION

In the process of Hindi adaptation of the Mooney's Problem Check List, the 330 original items were translated in Hindi. Translations were circulated among the four

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1. R.L.Mooney and L.V.Gordon,; The Mooney Problem Check Lists: Manual, (1950) Revision,
The Psychological Corporation
New York, p. 3.
 2. R.L.Mooney and/Gordon ; L.V. Op. Cit., p. 4.

experts drawn one each from the Psychology, English, Hindi and Education Departments. They were instructed to scrutinize the translation for readability, faulty expressions and vagueness. They were also requested to check the items for cultural applicability. Duly criticised and modified translation was re-edited and tried out on B.A. Part II students. They were asked to put a cross against the items which had difficult Hindi or was not understandable to them for any reason. The modified form was prepared. The responses obtained were again analysed. And the final form was accepted after its workability and understandability was established by research use. A good number of items were given Indian colour to fit in the available cultural setting. e.g. 'Not going to Church often enough' - GIRJAGHAR
'PRAYAH DHARMOPASANA (MANDIR, MASJID, (CHURCH) ADI) KE STHANO PAR ADHIK NA JANA'-

ITEM ANALYSIS

"The problem Check List is not a test. It does not measure the scope or intensity of student problems in such a way as to yield a test score. There is a temptation to treat the number of items checked as a score, but such counts must be regarded only as a "census count" of each student's problems - limited by his awareness of his problems and his willingness to reveal them.¹ Mooney and Gordon, themselves did not

1. Mooney & Gordon:

Op. Cit., p. 3

undergo the process of item analysis, for this check list, in the way it is done in the abilities or achievement tests. Therefore, for the Indian form of MPOL (C) also, no attempt was made to analyse the items.

VALIDITY

"A test is valid when it measures well what ^{it} is supposed to measure".¹

An analysis of the items of the MPOL checked by the students revealed that students responded to a wide range of items. The mean number of items for eleven separate problem areas of the MPOL (Hindi adaptation) ranged from 1.40 to 7.13 as compared to the American range from 1.5 to 4.0 items (Mooney and Gordon, 1957).² Nearly 87 % of the students of the present study responded in 'Yes' on the question "Do you feel that the items you have marked on the list give a well-rounded picture of your problems."

Nearly 91 and 67 percents of the subjects who attempted to answer question 3 and 4, 'whether you have or have not enjoyed filling out the list, do you think it has been worth doing ?' and " If the opportunity were offered, would you like to talk over any of these problems with some one on the college staff ? " have recorded their responses in 'Yes'. These ratings go for establishing high degree of content validity.

1. W.J. Michaels, and M.R.: Measuring Educational Achievement, New York, McGraw-Hill Book Co., (1950), p.104.

2. R.L.Mooney and L.V. Gordon, : Op. Cit., p. 7.

RELIABILITY:

Test reliability is the consistency of scores obtained by the same persons when retested with the identical test or with an equivalent form of the test".¹ But " the Problem of reliability of an instrument like the Problem Check List are not quite the same as those of a test for which scores are obtained. The Check List is designed to reflect the problems which a student senses and is willing to express at a given time. Since the problem world of any individual is a dynamic interrelation of changing situations and experiences, one would expect the number of items and the specific items checked to be somewhat different at each administration of the Check List....."² Therefore, the reliability of an instrument like the MPCL is quite different from those of other tests. Hence certain fluctuations will not be unexpected.

The most obvious method for finding reliability of a test is test-re-test on the same subjects. The reliability coefficient (r_{12}) in this case is the correlation of the scores obtained by the same subjects on two different administration of the test. Using this procedure of reliability estimate, the total scores on the MPCL obtained by the same set of students on two different testings at an interval of 17 days $N = 68$

1. A. Anastasi, : Psychological Testing, The Macmillan Co., (1955), New York, p. 28.

2. R.L.Mooney and : Op. Cit., p. 9.
L.V.Gordon,

belonging to B.A. II - Age-range 16 + to 20 + were correlated $r = .874$. An interval of 17 days was considered sufficient to make the subjects forget their previous responses. Therefore, it can, perhaps, be concluded that while the MPCL is designed to reflect the changing situations and experiences in individual case, it does not miss to exhibit sufficient stability on the whole to warrant general programmes of guidance and counselling on the basis of the survey results. Area-wise test-retest reliabilities were not considered necessary as all problems in a particular area might not continue with the individual in the same degree of intensity at the time of retest or some fresh ones may be added up. But it is presumed that balance will not be materially effected and 'consistency throughout a series of measurement'¹ may be relied upon.

THE STUDY HABITS TEST

It is often seen that some students with apparently high scholastic aptitude do very poorly at public or school examination, while others with only mediocre ability do well. To meet this challenge researchers have shown growing interest in knowing the study habits of the students with deviant academic achievement. Some instruments have been devised for the purpose.

1. L.J. Cronbach : Essentials of Psychological Testing
Harper Bros., Publishers, New York
York, Second Edition, (1960), p. 126.

Sheila Bhagoliwal (1960)¹ prepared a study-habit inventory on the lines of Krishnan and Wren. The sample consisted of 216 students of B.A. Part II. Reliability = .68; validity = .4785. D.S. Parikh (1958)² constructed and standardized a forty items study habit inventory for Gujrat University students. Normative sample consisted of 600 students. Reliability: $r = .924$.

Krishnan (1956)³ constructed thirty nine itemed study-habit inventory. The test is in English. Mitra (1959)⁴ in a critical study of this inventory did not find more than 20 items having an acceptable discriminating power.

Wren's (1941)⁵ study-habit inventory has been adapted in Hindi by the Bureau of Vocational Guidance, Patna. The inventory has twenty seven items and expresses habits and attitudes of study. Correlation between this inventory and grades range between .24 and .58.

K.K. Jamuar too, constructed a study habit inventory for Patna University students.

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1. Sheila Bhagoliwal; "Study Habits of the Under-graduate students", unpublished M.Ed. Dissertation, Allahabad University, (1960).
 2. D.S. Parikh : "Standardization of study-habits Inventory" Baroda University, Baroda, (1958).
 3. Krishnan : "Study Habits of the College students, Psychological studies Vol. 1, No. 1 (1956), pp. 63-64.
 4. S.K. Mitra : "A Scale of Study Habits", Psychological studies, Vol. 4, No. 1, (1959), p. 14.
 5. Wren : "Hindi Adaptation of Wren's study Habit Inventory" (1941), Bureau of Educational and Vocational Guidance Patna.

In the present investigation Indian adaptation of Brown and Holtzman's¹ Survey of study Habits and Attitudes (Hindi) has been used.^(App.E) The inventory has been standardized by Joshi² and Pandey³. The tool has been used by Darbari⁴ Narain⁵ and Singh⁶ in recent years besides many others.

"The purposes of SSHA are (a) to identify students whose habits and attitudes are different from those of students who earn high grades, (b) to aid in understanding students with academic difficulties, and (c) to provide a basis for helping such students to improve their study-habits and attitudes and thus more fully realize their best potentialities.⁶

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1. W.F. Brown and ; Survey of Study Habits and
W.H. Holtzman. Attitudes (SSHA), 1950, Rev., The Psychological Corporation, New York, The Manual.
 2. M.C. Joshi : - Professor & Head, Department of Psychology, Ravi Shankar University, Raipur.
 3. Jagdish Pandey : "Problems of Adjustment of Adolescents in Relation to their personality Variables" Unpublished thesis, (Ph.D), Banaras Hindu University, (1968).
 4. Smriti Darbari : "A study of Personality Characteristics of Under-, and Over-achieving College Students", M.Ed. Dissertation (being submitted) Allahabad University (1970).
 5. Sudha Narain : "Interests, Attitudes and Study Habits of High and Low Achievers". M.Ed. Dissertation, Allahabad University (1969).
 6. S.B. Singh : "A study of Academic Achievement of I year Science students in relation to their Intelligence and study habits" Unpublished M.Ed. dissertation, B.H.U., (1968).

Brown-Holtzman show that SSHA is a valid predictor of academic achievement in high school and college. The original questionnaire consists of 75 items. In the process of Hindi adaptation of SSHA items 9, 22, 29, 52, and 60 were dropped as a result of item analytic and item discriminating study. Sign test of Dixon and Mood (Edward, 1954)¹ was used for item discrimination. Internal consistency was judged by biserial coefficient correlation. Item No. 9 "Neither discriminated & nor contributed to the internal consistent total scores of the SSHA at any level of confidence. Items 22, 29, 52, and 60 did not discriminate at median though it added to the total score. Finally 70 items were retained.² Effect of response set on the scores of the SSHA did not show any ~~intra~~ influence of the self-esteem or self-enhancement or social desirability.³ Pandey⁴ used the method of (a) extreme group differences (b) content validity or comprehensiveness and (c) Predictive validity to establish the test validity. Dwivedi and Sharma (1968)⁵ found the coefficient of correlation of .33 between SSHA scores and academic achievement N=100 (adolescents). Singh (1968)⁶ in another study found this relationship to be $r = .40, N = 75$ class XI students.

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1. A.L. Edwards : statistical Methods for Behavioral Sciences, Rinehart, New York, (1954), pp. 228-229.
 2. Jagdish Pandey: "Hindi Adaptation of Brown-Holtzman's Survey of study habits and Attitudes (SSHA) Indian Psychological Review Vol. II, No.1, (1965), pp.53-58.
 3. _____: Response set on survey of study Habit and Attitudes (Hindi Adaptation) Psychological Studies, Vol. XI, No.1, January (1966).
 4. _____: Op. cit, Ph.D. thesis B.H.U. (1968) p.120
 5. C.B.Dwivedi & M.B.Sharma : Validity of survey of study Habits and Attitudes (SSHA) " Indian Psychological Review, Vol. 4, No.2 (1968), 120-122.
 6. Singh : Op. cit, M.Ed. dissertation B.H.U. (1968).

RELIABILITYTABLE III. 1.

Summary of different reliability coefficients
of SSHA (N= 81)¹.

Type Reliability	Amount of co-eff.	Time Interval	N
1. Test-retest	r ₁₂ .795	75 days	44
2. ..	r ₁₂ .845	15 days	37
3. Split-half	rtt .685		81
4. SE msmt.	5.87		81
5. Index of reliability	.896		81

RATIONALE FOR THE SELECTION OF INTELLIGENCE TEST.

Louis Long² (1966) has listed about 86 or more tests of intelligence~~xx~~ but from the review of the literature it was discovered that mainly five or six tests of intelligence are being used in Northern India. Some of them are as follows:

(a) Jalota's Sadharan Mansik Yogyata Pariksha', standardized on 1,341 students of grades VIII to XI of the city of Banaras. Kuder Richardson reliability =.938 validity against school marks ranged between .50 to .78.

(b) Mohsin's verbal test of Intelligence (VIT) has been standardized on secondary school population of Bihar state. Standardisation sample 1,270. Age-range 10-16 years. Time 40 minutes. Reliability (a) Odd even =.95 (a) Kuder Richardson = .89 Validity against: (a) Exam. Marks .56. (b) Mensel's General Intelligence Test = .54 (c) Terman Arithmetic Reasoning Test .63 (d) Raven's Progressive Matrices =.56. (c) Tandon's

1. Pandey : Op. cit. p. 120.

2. Louis Long & P.H.Mehta : The First Mental Measurement Hand Book For India, Central Bureau of Educ. and Res. Guid., Department of Psychological Foundations N.E.E.R.A. F., (1966).

'A Group Test of General Mental Ability Standardization sample 1,100 studying in B.H.U. Reliability: Odd Even $r = .91$. Validity against: (a) the Minnesota paper Form Board Test series AA $r = .28$ (b) Against exam. marks and Samoohik Yogyata Parakh .35 and .67 and (c) 'g' saturation based on spearman's technique .31 to .87.

(a) B.P.T. 14, 11 and 7 are adhoc unstandardized tests of the Bureau of Psychology.

Many of these tests donot suit the adult population of 18 + age group therefore in this study Joshi's Test of general mental ability^(App.F) has been chosen. The test has the experiential advantage of having been used on higher age group by Joshi and Srivastava¹ (19 + to 25 +), Saxena² (20 + to 54 +) Darbari³ (17 + to 19 +) undergraduate level. Its inter-state applicability has also been established by Joshi.^{4,5}

It is a 20 minutes (190 items) Verbal spiral-omnibus group point scale, standardized on a normative sample of 3,867 students of classes VIII to XII age group: 12 + to 19 + .

Reliability : Test-retest $r = .963 \pm .157$ and $.753 \pm .143$ with 7 and 24 months gap.

Validity : Item, element and factorial validities have been established.

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1. M.C. Joshi & R.P. Srivastava : "Intelligence and Teaching Attitude" Guidance Review, Vol. 2, No. 3, (1968), NCERT.
 2. P.C. Saxena : "A Study of Attitudes and Personality Variables of Teachers in Relation to their Teaching Competence", Unpublished M. Ed. dissertation, Allahabad University, (1968).
 3. Darbari : Op. cit.
 4. Meera Joshi : "Inter state applicability of HGT-GMA (I)" Madhya Bharti, Saugor University, Res. Jour., Hindi Sec., (1960)-3, 3, 18-21.
 5. _____ : "Inter-state applicability of HGT-GMA (II)" Maharashtra & Gujarat samples, J. Gujarat Res Sec., XIV, (1963) pp. 34-38.

EXTERNAL VALIDITY: Against (a) Jalota-Pandey Test of General Mental Ability $r = .824$ after attenuation, (b) BPT 7 of Bureau of psychology.U.P. $r = .876$ after attenuation.

C. THE SAMPLE

"To obtain the exact value of a parameter, observations have to be made on all the elements on the entire population".¹ But observation of each member in the population is tedious well-nigh difficult and seldom feasible. It is much time consuming and costly. Therefore, a workable and smaller representation of a larger whole is recommended as a basis for making inferences of certain population facts.

How to obtain a particular sub-set of individuals which might represent the population ? - is the question. Practical difficulties, particular to the Indian situation come in the way:

1. Psychological-testing is not very popular among adult students. Many of the subjects have an indifferent attitude and take tests only willy - nilly.

2. There is no effective control over the absentees from the different testing sessions.

3. It is not in practice to provide the test-results to individual subjects which damp^{en}s their enthusiasm for future testings.

1. Leslie Kish : "selection of the sample", In L. Festinger and D.Katz, ed., Research Methods in the Behavioral sciences, Holt, Rinehart and Winston- New York.

Besides random sampling for group tests has been criticized by Liddle.¹ What is likely to happen if one calls 10 boys out of a class of 40 ? They begin to wonder why was I selected ? or, more probably, why the pick on me ?" Does the suspicion decrease the testing motivation ? Do the absentees from different testing sessions (from among the randomized group) leaving incomplete cases introduce sampling bias ? These are some of ^{the} problems for the researchers in the area to answer ? Moreover, segregation (of randomized group) makes them feel uneasy in testing situations. They are always trying to wriggle out of the 'clutches' of the tester to join their other friends in receiving lessons in the class. They however, tolerate testing if the teacher 'lets-off' the whole class which he is reluctant to do for disciplinary and other reasons.

To get over some of these difficulties some researchers take recourse to 'cluster sampling', testing intact groups i.e. the whole class. The difficulty creeps in here too, when many do not complete all the tests and variance within the cluster is not greater than the total variance.

Therefore, in order to ensure a correct randomisation and true sampling of the population two methods, the cluster and the random have been combined though it involved a little more cost and labour.

1. S.K.V.Liddle : "Development and Standardization of a scholastic Aptitude and Developed Ability Test for High School classes", Ph.D. thesis, Agra University, (1965), p. 70.

The process of sampling consists of three stages;

1. Testing the whole sub-group of the population i.e. the cluster made up of the class section for all the tests.
2. Picking up every third person from the list of the students, providing each element in the population an equal chance of being included in the sample.
3. Completing the incomplete cases falling within the sample.

ADVANTAGES:-

1. Many of the absentees from the testing sessions were automatically eliminated just by chance.
2. The loss of learning from the class room teaching was alike for all. There was no loss of motivation, for taking the tests, which a randomly selected group suffers from due to the feeling of having been segregated for reasons beyond their understanding.
3. It was easier to complete a few incomplete cases.
4. It was assumed that those who were absent from their classes on the day of testing were just like others present on the day. There was no reason to believe that their¹ presence could make any vital difference.

UNIVERSE FROM WHICH SAMPLE WAS COLLECTED:

The science faculties of Lucknow, Gorakhpur and Allahabad Universities including the two associate colleges affiliated to it (Allahabad University) formed the Universe from which a sub-section was obtained to represent the population. These three institutions are referred to as A, B, C and D but the order does not correspond to the one in which they are put here. This

is done to maintain anonymity for ethical reasons.

THE UNIVERSITIES

The three Universities included in the study are state run Universities. They are residential in character and have identical scale of pay and selection procedure^u for their teachers. The method of examining students is almost the same. Courses offered have similar coverage. Majority of the students who join B.Sc. Part I are those who have passed the Intermediate examination of the U.P.Board. Only a microscopic^{co} minority joins B.Sc. Part I, having passed Intermediate from other Boards. In spite of all this it is to be admitted that two of these three Universities are very old, well established and have an edge over the third in equipment, and environment. Naturally, the staff as well as the students drawn by them may have regional differences in their cultural and mental make up.

THE ASSOCIATE COLLEGES

The two associate colleges studied here and used for comparison with an University, are run by private management. Teachers' grade, Selection procedure, environment, Library and Laboratory—equipment are almost the same. The pupils drawn by these institutions are not much different in their academic background. The courses offered by these colleges are the same, as for the University with which a comparison is made. The students from the associated colleges and from the University take the same examination, even under the same roof i.e. in the University campus.

UNIVERSITIES AND THE ASSOCIATED COLLEGES:TABLE III.2.

Institution	Biology Gr.	Maths Gr.	Total
A	42	69	111
B	20	193	213
C	117	160	277
D	130	95	225
Total	309	517	826

The groups of Over-, Under- and Normal-Achievers were matched on: Age; Caste; Male-female; Married-Unmarried dichotomies; Parents education, ^{income} and occupation.

Seventy students (Under-, & Over-Achievers) and forty six teachers in the science faculties of the three state run universities and the two associate colleges of the Allahabad University formed the sample for interviewing. The sample was selected following the purposive-incidental technique. Randomization could not be possible as the follow up of Under-achievers or the Over-achievers was difficult. Many who passed B.Sc. in 1969 could not be traced out for want of information. Many of them had branched out in different subjects of post graduate studies and professional courses. Most likely many left the University to join jobs. In case of failures a large number may have chosen the course of appearing as ex-students. Similarly it was quite difficult to get time from the busy schedule of the teachers.

SAMPLING LIMITATIONS

1(a) The sample is representative of the population of the Under-graduate science students studying in the B.Sc. part II during the year 68-69. in the three universities viz. Allahabad, Lucknow, Gorakhpur and the two associated colleges of the Allahabad University having under-graduate teaching.

(b) Students offering only the following combinations have been represented;

(a) Physics, Chemistry, Statistics and Mathematics

(b) Chemistry, Zoology and Botany.

(Other combinations have not been represented as they are not available in all the three universities, having a common permutation and combination of subjects).

2. Students from Convent institutions who had reading difficulty in Hindi were excluded.

D. MECHANICS OF DATA COLLECTION

It is ^atruism that no research results are any better than the methods by which they are obtained.¹

A description of the tools developed for the collection of data has been given earlier in this chapter. In this section, a brief description of the procedure adopted and the machinery used for obtaining the data has been put down.

The data were collected from each class-section in two sessions on two different days by the Research staff.

1. Festinger and Katz, : Research Methods in the Behavioral Sciences, Holt, Rinehart, And Winston, New York, p.1.

An interpersonal relationship was established with the subjects and the purpose of the study was explained to them to arouse their interests. They were made to sit comfortably. Their cooperation was ensured and they were properly motivated before the actual testing started.

In order to obtain background information including the socio-economic status, health condition, Interests, Attitudes; Future-plans and Self-concept, Personal Data schedule (Appendix A) was administered. Next to follow was the intelligence Test-(Joshi's Test of Mental Ability).

Subjects were given instruction uniformly as provided in the manual. Examples were illustrated on the Black-Board wherever needed. When it had been confirmed that they knew what they were required to do, booklets with separate answer sheets were distributed. They were asked to put down their name etc. on the answersheet. They were strictly prohibited not to open the booklets unless asked to do so. After they had filled in all required information on the answersheets the signal was given to start the test. Time limit was strictly adhered to.

Mooney's Problem Check-List and study Habit Tests were administered in the second session of the testing on the next day. These are self-administering untimed tests. Subjects were asked to follow the instructions given on the first pages of the tests silently while they were read out loudly to them by the Research staff. Before the subjects were left to test-taking, it was made sure that they knew how to mark the test.

For all the tests except the PDS and Interview Schedules separate answersheets have been used. Traxler ¹ has pointed out that "from the standpoint of speed, accuracy and economy of scoring, the recording of responses on the answer-sheet is unquestionably preferable to the writing of responses in test booklets". Harper ² too found that separate answersheets provided no problem to the students even if they have had no previous experience with the objective tests.

structured interviews of Teachers from the three universities and the two associated colleges of Allahabad, and of under-, and Over-achieving students were conducted by the Research staff.

E. STATISTICAL TREATMENT OF DATA

The test returns were scored with the help of scoring masks in case of MPOL, study-habit and Intelligence Tests. The personal data schedule was quantified according to fixed weight_{ages} and in frequencies, later converted into percentages for some part of it.

Arithmetic mean and S.D. from the original scores were computed.³ The formula^a for weighted mean of N groups⁴ and for SD from combined distributions⁵ were used.

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1. A.E.Traxler: "Administering and Scoring the Objective Test", Educational Measurement, American Council of Education, (1950), p. 385.
 2. A.E.Harper Jr.: "Are separate Answer sheets Harder ?" Journal of Vocational and Educational Guidance Vol. 10, No. 1, (1962).
 3. H.E.Garrett, : Statistics in Psychology and Education. Allied Pacific Private Ltd., Bombay, (1962), p. 53.
 4. 34 Ibid p. 30
 5. 56 Ibid p. 56.

To study the differences between the Over- and Normal; Over- and Under; Under-and Normal-, on the variables under study, the chi-square, 't' test, C.R.¹ and differences between percentages were used. Product Moment correlation between Academic achievement and intelligence was also found out. Justification for using even 't' test for large N has been sought from V.G. Cicirelli²

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1. Q.Mc. Nemar: Psychological Statistics John Wiley & Sons., Inc., New York, 1962, p. 84 and 89.
 2. V.G. Cicirelli: Vocational Aspiration and Creativity-
The Journal of Educational Research.
Vol. 60, No. 2, (October 1966); pp.68-70.

RESULTS

CHAPTER IV

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CHAPTER IV

RESULTS

In this chapter an attempt has been made to present the results as obtained from the analysed data. The results, for the purpose of convenience have been put as below:

I. Problems of Over-, Under- and Normal-Achievers and group comparison between them in two curriculums viz., Mathematics and Biology.

II. Group differences on Intelligence, Attainment, Study-Habits, Attitudes and Self-Concept.

III. Results obtained on some variables of the Personal Data Schedule.

IV. Results obtained on Interview-Schedules for Over- and Under-achievers and their teachers.

In order to obtain precise information about the problems of Over-, Under- and Normal-achievers on eleven areas of MPCL and its Total, Means and S.Ds of the scores obtained by the groups on twelve possible sub-score areas have been calculated and later used for group comparison. 't' Test has been used to find out differences between means of various groups under consideration.

The results are followed by a discussion offering plausible explanation for the findings in Chapter V.

Score of the Mooney Problem Check List. (Maths. Gr)
(O-U- & Normals: Pooled from Institutions A, B & C)

Sub-Score Area	OVER-ACHIEVERS N = 108		UNDER-ACHIEVERS N = 146		NORMAL-ACHIEVERS N = 168		Groups Compared
	Mean	S.D.	Mean	S.D.	Mean	S.D.	
HPD	3.97	3.02	3.62	3.08	3.35	2.82	U-N N-O O-U
FLZ	3.71	4.11	4.98	3.80	3.95	4.15	U-N*
IRA	5.45	1.24	6.00	3.70	5.83	4.33	N-O O-U
EPH	3.93	2.89	3.57	3.20	3.76	3.07	U-N N-O O-U
PPH	4.41	4.73	4.68	3.41	3.93	3.45	U-N N-O*
GM	3.23	3.39	3.45	3.87	2.92	3.91	N-O O-U
							U-N N-O O-U

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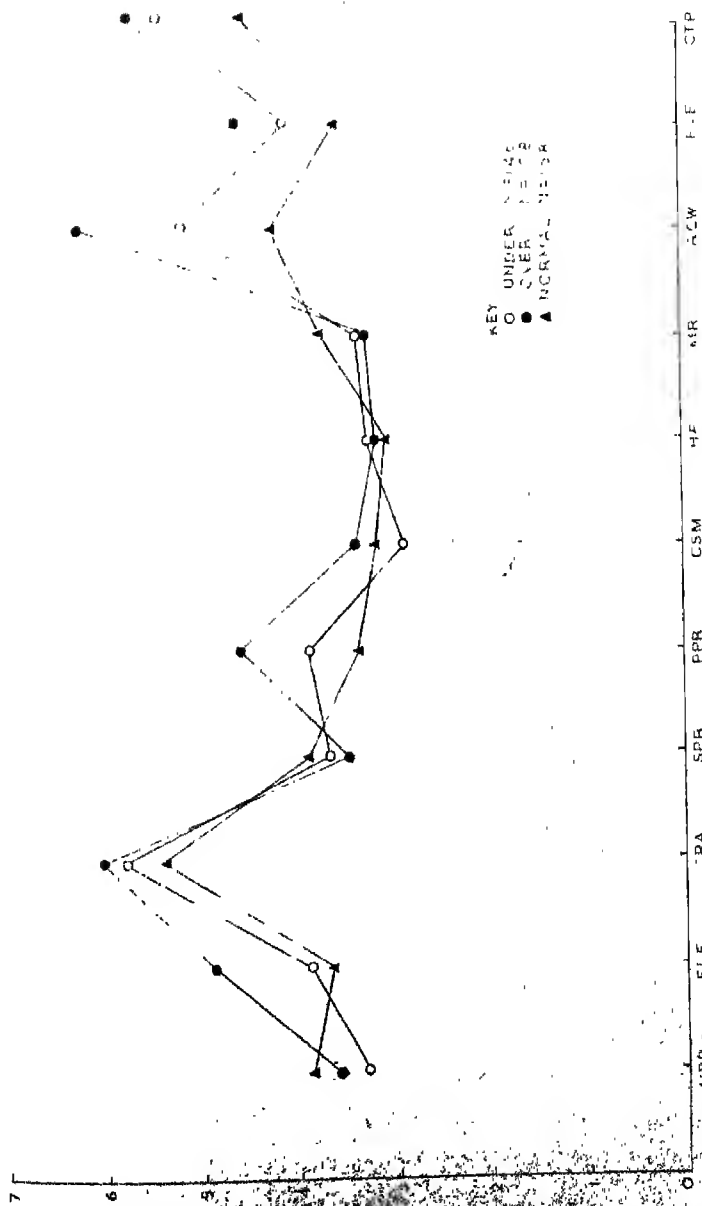
Sub-Score Area	OVER-ACHIEVERS N = 108			UNDER-ACHIEVERS N = 146			NORMAL-ACHIEVERS N = 168			Groups Compared
	Mean	S.D.		Mean	S.D.		Mean	S.D.	"t"	
HF	3.17	3.06		3.25	3.01		3.35	4.26	.18 .24 .08	U-N N-O O-U
MR	3.86	3.55		3.31	3.16		3.43	4.00	.46 .13 .61	U-N N-O O-U
ACW	4.30	3.42		6.29	4.45		5.20	3.61	1.76 2.36 3.55	U-N N-O O-U**
FVE	3.62	3.61		4.69	4.95		4.12	3.48	1.15 1.18 2.01	U-N N-O O-U*
CTP	4.62	3.73		5.74	3.89		5.04	3.95	.89 1.59 2.33	U-N N-O O-U*
TOTAL (T.P.)	44.73	29.31		49.36	28.44		44.20	28.10	.14 .66 1.23	U-N N-O O-U

*Indicates significance of difference between groups to be beyond .05 level.

**Significance of difference beyond .01 level.

HPD - Health & Physical Developments; FLE - Finances, living conditions & employment; SRA - Social & Recreational Activities; SPA - Social - Psychological Relations; PPR - Personnel - Psychological Relations; CSA - Courtship, Sex & Marriage; HF - Home & Family; MR - Morals & Religion; ACW - Adjustment to College Work; FVE - The Future - Vocational & Educational; CTP - Curriculum & Teaching Procedures; T.P. - Total Problems.

PROFILE SHOWING THE PROBLEMS OVER UNDER & NORMAL
ACHIEVING STUDENTS DRAWN FROM INSTITUTIONS A,B,C
(MATH GROUP) N=422



PROBLEM AREAS

Maths. Gr. (Pooled O-U-N from A, B & C)

Table IV.1 shows that significant differences were identified in the Maths. Group through the use of "t" test of difference between means in only five of the twelve possible sub-score areas.

A "t" value of 2.54 (between Under and Normal and Over-and Under), significant beyond the .05 level suggested that under-achievers showed more concern in the area of Finances, Living Conditions, and Employment than did the over-achievers or the normal-achievers. The groups of Under- & Normal-Achievers and that of over- and under- Achievers differ significantly on FLE.

The over-achievers seem to have more concern about the Personal - Psychological Relations as compared to the normal-achievers. "t" value of 1.97 makes the group difference between the normal and the over-achievers significant at .05 level.

In the area of Adjustment to College Work under-achievers revealed more problems as compared to over-achievers. The mean of under-achievers on this area is higher than that of Over and Normal achievers. "t" value of 3.55 makes the group difference between the over - and the under-, significant beyond .01 level.

As compared to Over-achievers the normal-achievers have more problems in this area. Mean for the Normals is higher and a "t" value of 2.36 makes the group difference significant beyond .05 level.

The under-achievers seem to realise that they have problems in the area—'The Future - Vocational and Educational'. Their concern in this area appears to be more than that of over-achievers. Mean value is higher for the under-achievers. A "t" value of 2.01, significant beyond .05 level, was obtained when the two groups were compared.

The under-achievers have revealed that they have more problems concerning with curriculum and Teaching Procedures as compared to over-achievers. Obtained "t" value of 2.33 is significant beyond .05 level. No significant differences were found among the achievement groups in either the number of total problems checked or in the areas of HPD, SRA, SPR, CEM, HF and MR. The under-achievers have higher mean on FLE, SRA, PPR, CEM, ACW, FVE, and on the total MPCL. The overs have higher mean on HPD, SPR and MR whereas Normals, have higher mean on HF and CTP. Perhaps, this indicates the problem areas of Over- Under-and Normal; but , as a group comparison much reliance can not be placed on these apparent differences which fail to yield a significant "t" value.

Mean and 't' Comparisons on Sub-Score Areas and Total Score of the Money Problem Check List (BIO. Gr.) (O-U- & Normals : Pooled from Institutions A, B & C)

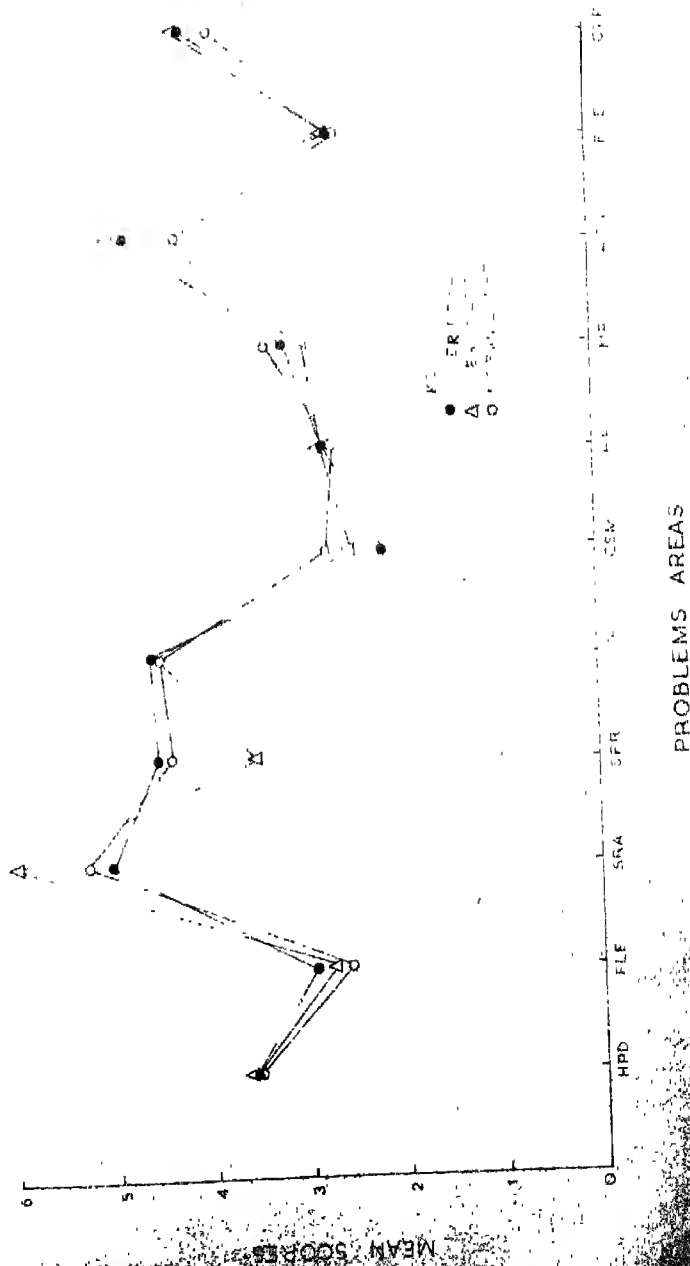
Sub-Scores Areas	OVER-ACHIEVERS N = 37			UNDER-ACHIEVERS N = 64			NORMAL-ACHIEVERS N = 74			t ²	Groups Compared
	Mean	S.D.		Mean	S.D.		Mean	S.D.			
EPD	3.64	2.59		3.64	2.29		3.63	2.76		.01 .20 0.0	U-N N-O O-U
FLM	2.75	2.61		2.94	3.79		2.66	2.92		.48 .16 .30	U-N O-N O-U
GRA	6.05	3.82		5.01	3.64		5.32	3.69		.50 .83 1.35	U-N N-O O-U
SPR	3.59	2.11		4.52	3.26		4.48	3.16		.07 1.78 1.75	U-N N-O O-U
PPR	4.61	3.11		4.61	3.89		4.56	4.32		.07 .06 .00	U-N N-O O-U
CEM	2.51	3.10		2.23	3.55		2.86	3.64		1.03 .53 .42	U-N N-O O-U

Contd

Sub-Scores Area	OVER-ACHIEVERS N = 37				UNDER-ACHIEVERS N = 64				NORMAL-ACHIEVERS N = 74				Groups Compared	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	st ^a	
HF	2.89	2.00	2.86	2.87	2.76	2.51							.21 .29 .06	U-N N-O O-U
HR	3.08	2.08	3.20	3.33	3.40	2.94							.37 .66 .22	U-N N-O O-U
ACW	5.16	3.67	4.84	3.77	4.34	4.21							.74 1.06 .42	U-N N-O O-U
FVE	2.70	2.12	2.77	2.32	2.61	2.54							.39 1.53 .15	U-N N-O O-U
GTP	4.35	3.53	4.24	2.67	3.95	3.73							.53 .55 .16	U-N N-O O-U
TOTAL	39.28	22.27	40.62	24.55	36.81	34.48							.75 .45 .28	U-N N-O O-U

^at-Values not significant at any level.

PROFILE SHOWING THE PROBLEMS OF OVER-UNDER & NORMAL
ACHIEVING STUDENTS (BROWN BECK) IN PROBLEM AREAS
BROWN BECK, 1977



Biology Group:

Table IV.2 compares over-, under- and Normal Achievers from institutions A, B & C. The groups have not differed significantly on any of the eleven MPCL areas or its Total. Group differences between Normals- and Overs- and Overs- and Unders- on SPR are although not significant yet they are nearest to the .05 level of significance. Over- Achievers have higher Mean on SRA, HF, ACW and CTP. The under-achievers have higher Mean on FLE, SPR, FVE and the total MPCL. The Overs- and the Unders-, both, have equal Mean value on HPD and PPR areas. The Normals-, are higher on CSM and MR. The group differences do not reach point of statistical significance but ^{on the whole} (numerically) possibly the under-achievers experience more problems than the Overs- or the Normals-.

TABLE IV.3

Mean and 't' comparison on sub-score Areas and Total MPCL, between under- and under-Achievers in the Biology and Maths groups (Pooled from A, B & C)

	BIOLOGY		MATHEMATICS		
Sub-score Areas	UNDER-ACHIEVERS N = 64		UNDER-ACHIEVERS N = 146		
	Mean	S.D.	Mean	S.D.	"t"
HPD	3.64	2.29	3.62	3.08	.05
PLE	2.94	3.79	4.98	3.80	3.64**
GRA	5.01	3.64	6.00	3.70	1.83
SPR	4.52	3.26	3.57	3.20	1.97*
PPR	4.61	3.89	4.68	3.41	.12
USM	2.23	3.55	3.46	3.87	2.27*
NP	2.86	2.87	3.25	3.01	.45
NR	3.20	3.33	3.31	3.16	.11
ACW	4.84	3.73	6.29	4.45	2.45*
VE	2.77	2.32	4.69	4.95	.38
STP	4.24	2.67	5.74	3.99	3.06**
TOTAL	40.62	24.55	49.38	28.44	2.27*

*Indicates group differences significant beyond .05 level.
 ** Indicates group differences significant beyond .01 level.

Table IV.3 reveals that under-achievers of BIO. & MATHS differ on FLE. Finances - Living Condition and Employment (from Institutions A,B & C). Higher Mean for Mathematics group on this area suggests that they have more problems as compared to under-achievers of the Biology group. A "t" value of 3.64, significant at .01 level confirms the group difference.

The significant differences between the group of under- and under-achievers from Bio. and Maths curriculums are perceptible also on SPR (Social-Psychological Relations), CSM (Courtship, Sex and Marriage), ACW (Adjustment to College Work), CTP (Curriculum and Teaching Procedures) and the total MPCL. The group differences in the CTP area are significant beyond .01 level and at or beyond .05 level on SPR, CSM, ACW and the total MPCL. Mean of under-achievers of Maths. Gr. on CSM, ACW, CTP and the total MPCL is high and suggestive of their having more problems in these areas. The Biology under-achievers have higher mean on SPR - possibly they are more concerned with Social - Psychological relations as compared to the Maths. under-achievers. Out of the remaining six areas Biology ^{under-}achievers have higher mean on HPD only. The Maths. under-achievers have higher mean on five areas i.e. SRA, PPR, HF, MR and FVE.

TABLE IV.4

Mean and 't' comparisons on Sub-Score Areas
 Total Score of the NPCL, Between Over- and
Over- Achievers in the Bio. and Maths. Grs.
 (Pooled from A, B & C)

	BIOLOGY		MATHEMATICS		
Sub-Score Areas	OVER-ACHIEVERS N = 37		OVER-ACHIEVERS N = 108		
	Mean	S.D.	Mean	S.D.	"t"
HPD	3.64	2.59	3.97	3.02	.32
MLE	2.75	2.61	3.71	4.11	1.65
BRA	6.05	3.82	5.45	1.24	.82
SPR	3.59	2.11	3.93	2.89	.77
PPR	4.61	3.11	4.41	4.73	.29
CSM	2.51	3.10	3.29	3.39	.36
HF	2.89	2.09	3.17	3.06	.28
MR	3.08	2.08	3.86	3.55	1.62
ACW	5.16	3.67	4.30	3.42	2.86**
FVE	2.70	2.12	3.62	3.51	1.91
CTP	4.35	3.53	4.62	3.73	.39
TOTAL	39.28	22.27	44.73	29.31	1.17

** Indicates group differences significant beyond .01 level.

Table IV.4 shows that over-achievers of BIO. & MATHS curriculums differ significantly beyond .01 level on ACW (Adjustment to College Work). Over-achievers of Bio. group seem to have more problems in this area as compared to the over-achievers of Maths. Group. On the FVE (The Future - Vocational and Educational) ^{the} of MPCL, the Maths. Group over-achievers have the higher Mean value, 0.5 level significance is missed just narrowly.

The Mathematics group over-achievers have higher mean value on eight sub-score areas viz., EPD, FLE, SPR, CSM, HF, MR, FVE, CTP and the total MPCL. The Biology group under-achievers have higher Mean on SRA, PPR and ACW areas of MPCL.

C.N = 58
D.N = 16

KEY
● 100%
○ 100%
○ 100%
○ 100%
○ 100%
○ 100%

PROFIRM AREAS

HPD FLE SNA S-R LPA CSP JF JR A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12 A13 A14 A15 A16 A17 A18 A19 A20 A21 A22 A23 A24 A25 A26 A27 A28 A29 A30 A31 A32 A33 A34 A35 A36 A37 A38 A39 A40 A41 A42 A43 A44 A45 A46 A47 A48 A49 A50 A51 A52 A53 A54 A55 A56 A57 A58 A59 A60 A61 A62 A63 A64 A65 A66 A67 A68 A69 A70 A71 A72 A73 A74 A75 A76 A77 A78 A79 A80 A81 A82 A83 A84 A85 A86 A87 A88 A89 A90 A91 A92 A93 A94 A95 A96 A97 A98 A99 A100

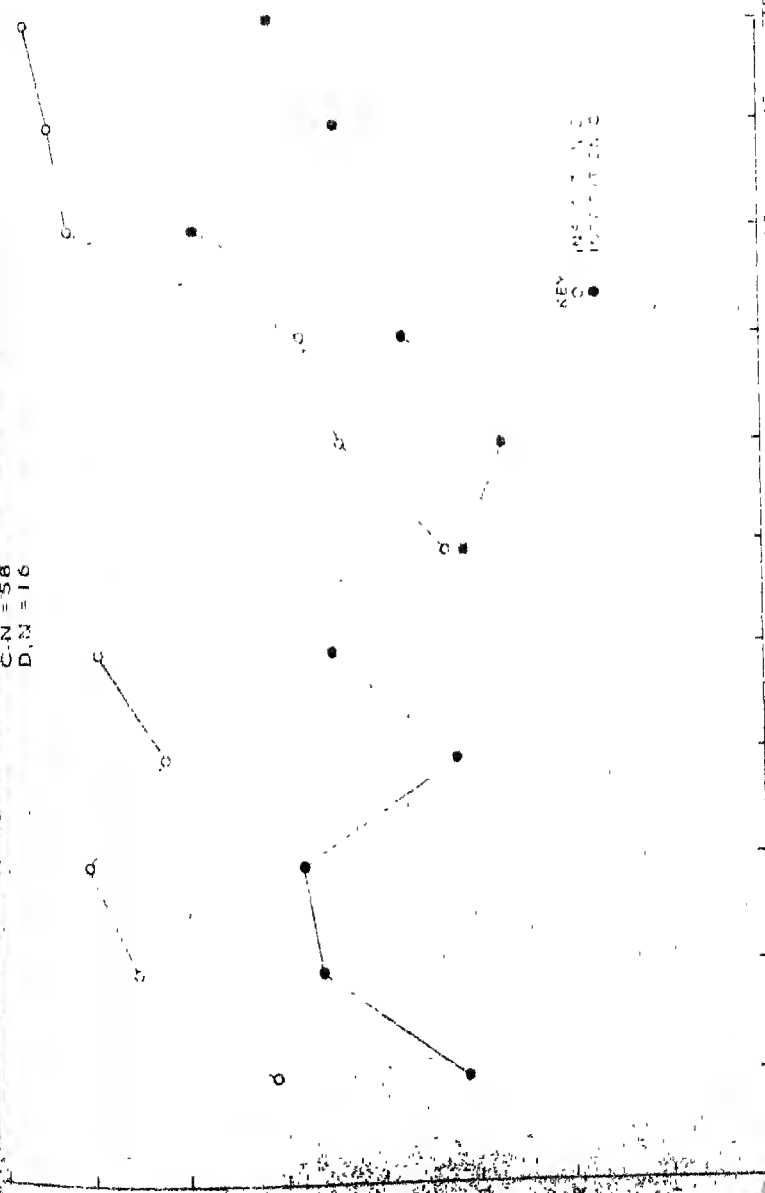


Table IV.5 compares the under-achievers (Maths) from the associate colleges and one of the three universities included in this study.

Significant group differences are perceptible on HPD beyond .01 level; FLE, beyond .05 level; SPR, beyond .01 level; PPR, beyond .01 level; HF, beyond .05 level; MR, beyond .01 level; FVE, CTP and the total MPCL, beyond .01 level. On all these areas the under-achievers from the associate colleges (D) have higher Means indicating that perhaps as compared to the University underachievers, they have more problems and in many areas too. In the remaining three areas (SRA, CSM & ACW) wherein statistically significant differences have not been found, the mean for the associated colleges underachievers is higher.

TABLE IV.6

Mean and 't' comparison on Sub-Score Areas and Total Score of the MPCL, between the Over- and Over-Achievers of institutions C & D in the Maths. Group.

Sub-Score Areas	M A T H E M A T I C S				
	OVER-ACHIEVERS		OVER-ACHIEVERS		"t"
	N=37	Institution	N=12	Institution	
	C		D		
	Mean	S.D.	Mean	S.D.	
HPD	3.38	2.66	6.3	4.75	2.02*
FLE	3.16	4.48	5.50	3.87	1.75
SRA	5.78	4.95	5.66	2.11	.119
SPR	4.49	3.55	5.00	2.52	.548
PPR	4.49	3.71	5.42	3.03	.877
CSM	2.92	3.19	2.58	2.22	.409
HF	3.00	2.87	3.75	2.20	.949
MR	4.65	3.69	4.33	2.22	.361
ACW	4.81	5.18	6.25	2.80	1.23
FVE	3.73	4.29	4.58	2.44	.085
GTP	5.84	4.01	6.08	4.35	.168
TOTAL	44.86	35.02	55.50	29.11	.062

*Group difference significant at the .05 level of confidence.

Table IV.6 compares over-achievers from the associate Colleges with the over-achievers from one of the universities. A "t" value of 2.02 significant beyond .05 level on HPD area with higher mean value for institution D - the associate colleges, suggests that over-achievers in associate colleges show greater concern about Health and Physical Development as compared to over-achievers from institution C - a University. The group differences are not significant for other areas of the MPCL and its total score.

The over-achievers from the associate colleges express more problems on the MPCL areas of HPD, FLE, SPR, PPR, HF, ACW, FVE, CTP and the total MPCL. This group has higher Mean on these areas. The University over-achievers have higher Mean on SRA, CSM and MR.

TABLE IV.7

Mean and 't' comparison on Sub-Score Areas and Total Score of the MPCL, between the Under-, and Under-Achiever of Institutions C & D in Biology Group.

	B I O L O G Y					
Sub-Score Area	UNDER-ACHIEVERS N = 45		UNDER-ACHIEVERS N = 33		t _{df}	
	Mean	S.D.	Mean	S.D.		
HPD	3.48	1.99	5.52	2.98	3.37**	
FLE	2.59	3.38	5.51	3.27	3.00**	
SRA	4.75	3.53	6.36	2.63	2.33*	
SPR	4.53	3.52	5.03	3.35	.64	
PPR	4.77	3.92	6.42	3.55	1.96	
CSM	1.77	2.71	3.12	3.83	1.75	
HF	3.04	3.11	3.69	3.65	.83	
MR	3.24	3.56	4.12	3.83	1.03	
ACW	4.87	3.90	7.06	4.24	2.36*	
FVE	2.57	2.36	3.87	2.69	2.24*	
CTP	4.24	2.36	6.88	4.17	3.3**	
TOTAL	39.44	26.13	57.51	21.35	3.35	

* Group Differences significant at the .05 level of confidence.

** Group differences significant at the .01 level of confidence.

PROFILE SHOWING THE PROBLEMS OF UNDER ACHIEVING STUDENTS
DRAWN FROM INSTITUTIONS C & D BIOLOGY GROUP

CAREER
CAREER

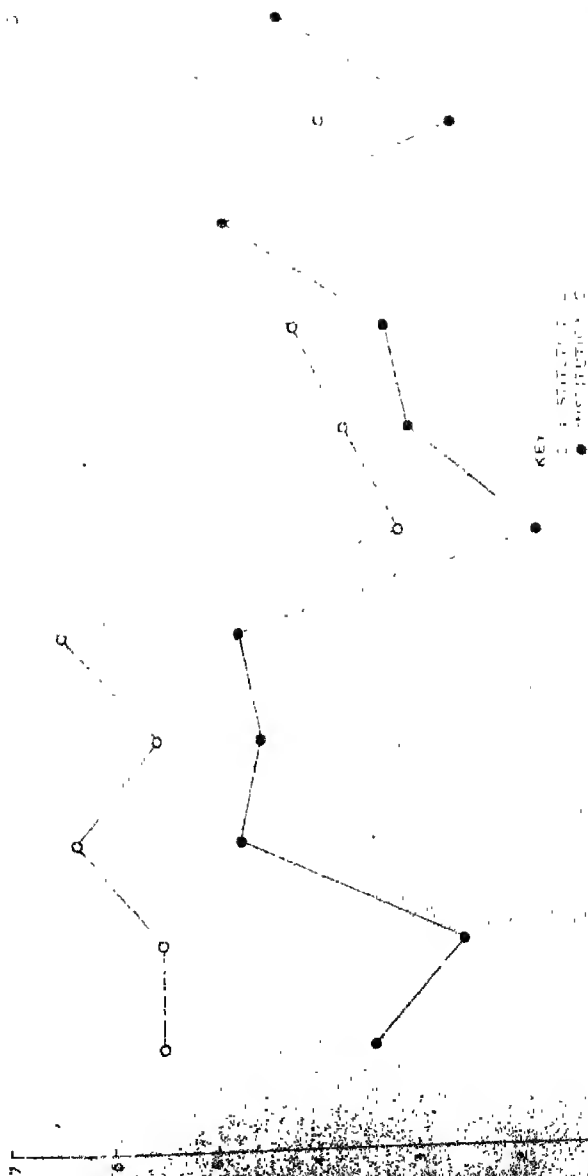


Table IV.7 compares underachievers from C and D institutions. significant group differences are identified on HPD, FLE, SRA, ACW, FVE, CTP sub-areas and the total MPCL. The under-achievers from associated colleges seem to be more concerned about Health and Physical Development; Finances - Living Conditions and Employment; Social and Recreational Activities; Adjustment to College Work; The Future - Vocational and Educational and Curriculum and Teaching Procedures. The group differences are significant on these areas, beyond .05 and .01 levels. The PPR area misses touching the mark of significance at .05 level just narrowly. The under-achievers from institution D, the associated colleges, have obtained higher mean score for all the eleven MPCL areas and its total. They have thus expressed more problems in all these areas.

TABLE IV.8

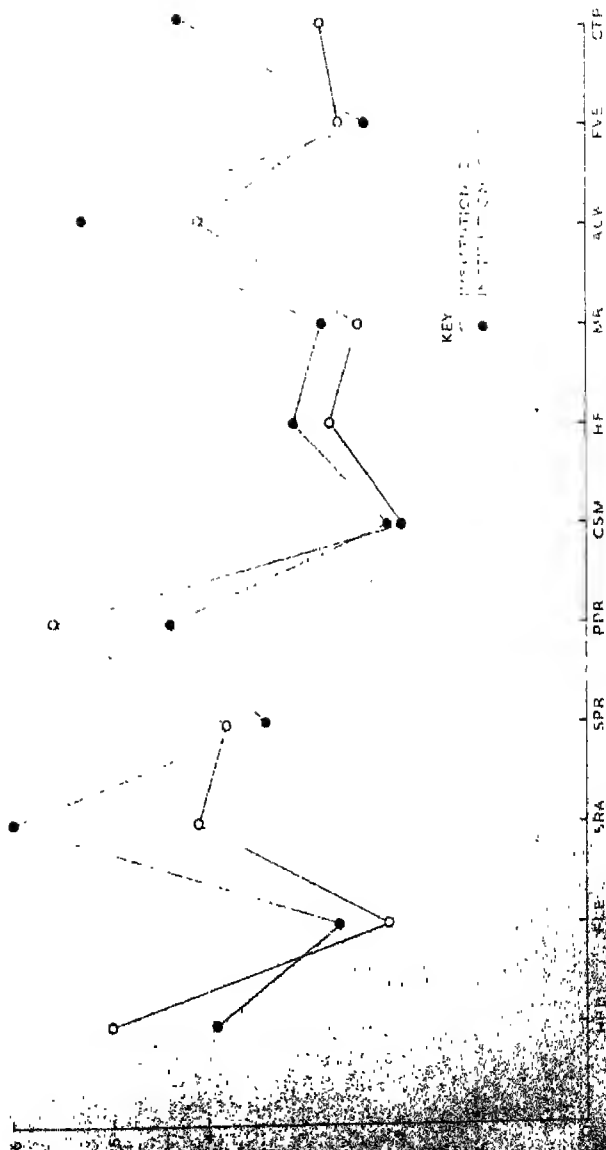
Mean and 't' comparison on Sub-Score Areas and Total Score of the MPCL, between the Over-, and Over-Achiever of Institutions C & D in Biology Group.

Sub-Score Area	B I O L O G Y					
	OVER-ACHIEVERS			OVER-ACHIEVERS		
	N=24 Institution C			N=16 Institution D		
	Mean	S.D.		Mean	S.D.	
HPD	3.91	2.82		5.00	5.21	.78
FLE	2.61	2.60		2.18	2.63	.59
SRA	6.79	4.18		4.12	3.18	2.42*
SPR	3.41	1.87		3.87	2.38	.687
PPR	4.41	3.41		5.69	4.02	1.04
GBM	8.16	1.77		1.93	2.41	.328
HF	3.12	1.92		2.75	2.31	.33
MR	2.83	2.00		2.44	2.23	.56
ACW	5.33	3.50		4.18	3.66	.90
FVE	2.37	1.77		2.68	4.87	.24
GTP	4.33	3.63		2.81	2.31	1.59
TOTAL	38.07	22.33		34.50	14.23	.617

* Group differences significant at the .05 level.

PROFILE SHOWING THE PROBLEMS OF OVER-ACHIEVING STUDENTS DRAWN FROM INSTITUTIONS C & D (BIOLOGY GROUP)

C.N = 24
D.N = 16



PROBLEM AREAS

Table IV.8 shows comparison between over-achievers from associated colleges and a University. The group difference significant beyond 0.05 level is identified on SRA (Social and Recreational Activities). Possibly the over-achievers from institution C (a University) experience more problems about Social and Recreational activities. The group differences are not significant in any other area of the MPCL or its total.

Over-achievers from institution C have larger mean score for FLE, SRA, CSM, HF, MR, ACW, CTP and the total MPCL. The over-achievers from D institution have obtained higher mean value on HPD, SPR, PPR and FVE. Higher Mean value suggests more problem in the particular area.

Rank Order, Frequencies, and Percentages of 25 Problems Most Frequently Checked by Under-Achievers (Maths Group- A.B.50 Institutions) On the MPCL And their Comparison on the Items with the corresponding Percentages of Over-Achievers

S.No.	Item No. on MPCL	PROBLEMS	Category			Under-Achievers N= 146			Over-Achievers N= 108			Level of significance
						Freq- uency	Perce- ntages	Rank order	Freq- uency	Perce- ntages	Rank order	
1	243	वातम विश्वास की कमी होना	PPR			71	48.63	1	26	24.07	14	.01
2	73	बलिक लोकप्रिय होने की चाह होना	SPR			70	47.95	2	38	35.18	4	.05
3	56	इतना कुछ और स्वस्थ न होना बिना होना चाहिये	HPD			64	43.84	3	48	44.44	1	NS
4	41	प्रभावकारी ढंग से व्यय करने की विधि न जानना	ACW			63	43.15	4	33	30.56	8	.05
5	206	सय कर व्यय पूरा न कर पाना	ACW			63	43.15	4	27	25.00	13	.01
6	151	व्यय में बलिक सय न दे पाना	ACW			60	41.60	5	29	26.85	11	.05
7	261	परिचितों के लिए परेशान होना	ACW			60	41.60	5	35	32.41	6	NS
8	55	वायस्थ पुस्तकों को ग्राह करते में कठिनाई होना	GTP			59	40.41	6	31	28.70	9	.05
9	77	प्रबल करने पर भी बहुत से कामों में सकल न हो पाना	PPR			58	39.41	7	20	18.58	19	.01
10	199	माया बिना का मुक से बहुत बलिक वाशा रखना	HPD			56	38.36	8	21	19.44	18	.01

Cont.....

S.No.	Item No on HPCL	PROBLEMS	Case- Story	Under Achievers N= 146			Over Achievers N= 108			Level of Significance Order of C.R.
				Freq- ancy	Percen- tage	Rank order	Freq- ency	Percen- tage	Rank order	
11	288	बहुत बकिक सामाजिक जीवन का होना	SRA	54	35.99	9	35	32.41	6	NS
12	4	पर्याप्त शारीरिक व्यायाम का न होना	HPD	51	34.93	10	36	33.33	5	NS
13	1	बकिांश समय ध्यान अनुभव करना	HPD	50	34.25	11	30	27.78	10	NS
14	35	माता पिता का भेरे लिए बहुत बकिक त्याग करना	HP	50	34.25	11	29	26.85	11	NS
15	215	कपती व्यावसायिक योग्यता के जानने की आवश्यकता होना	HPD	49	33.56	12	21	19.44	18	.05
16	42	कपने कार्य से वासानी से ध्यान हट जाना	ACW	48	32.88	13	18	16.67	20	.01
17	56	सर में कमी २ पीछड़ा होना या मारीफ अनुभव करना	HPD	48	32.88	13	33	30.56	8	NS
18	65	बहुत सी बकिक समस्याएं होना	FLB	48	32.88	13	22	20.37	16	.05
19	67	कपने कलश के समय का कत्वा समयों न कर करना	SRA	47	32.19	14	34	31.48	7	NS
20	81	कमी बातों को बहुत गंभीरता पूर्वक सोचना और करना	PPR	46	31.51	15	47	43.52	2	.05
21	216	कतारें बहुत बड़ी होना	GTP	46	31.51	15	26	24.07	14	NS
22	11	कनोरल के लिए पर्याप्त समय न होना	SRA	45	30.82	16	28	25.93	12	NS
23	207	कच्ची तरह ध्यान न लगा पाना	ACW	45	30.82	16	21	19.44	18	NS
24	51	रकने के स्थान पर बचक में कठिनाई होना	GTP	43	29.45	17	39	36.11	3	NS
25	161	विवाहक एकलकी बातों में कच्ची सलाह देने वाले का कभाव होना	GTP	40	27.40	18	21	19.44	18	NS

Item analysis of the check List was also accomplished for the group of Over- and Under-achievers from institutions A, B, C (combined) and D . The assumption was made that since the three groups of achievers did not differ significantly in many areas it might be possible to identify the most frequently checked problems expressed by the Over- and Under-achievers. Table IV. 9 presents the results of the item analysis completed for the Over- and Under-achievers (pooled from A, B, & C Maths group). Twenty five problems most frequently checked by the under-achievers have been put in order of rank, frequencies of selection and percentages. Item no. on the MPOL along with the problem is followed by the category in which it can be found on the check List.

The findings are in keeping with expectations that most of the underachievers would select with greater frequency problems that fell into the categories of ACW (Adjustment to College work), and CTP (Curriculum and Teaching Procedures). Six problems are selected from ACW and four from CTP. In descending order 4 most frequently checked problems are from HPD and 3 each from SRA and PPR

In the AGW area the differences of percentages on the following problems: (1) PRABHAVKARI DHANG SE ADHEYAN KARNE KI VIDHI NA JANNA' (2) 'SAMAY PAR ADHEYAN PURA NA KAR PANA' (3) 'ADHYAN ME ADHIK SANAI NA DE PANA' (4) 'APNE KARIYA SE AASANI SE DHEYAN HAT JANA', between the under- and over-achievers is significant beyond .05 or .01 level of confidence. In all the four cases the percentages obtained by under-achievers on the above problems is higher, perhaps suggesting that the concern of underachievers as compared to over-achievers, gravitates more on these problems of Adjustment to School Work area.

In the PFR area 48.63 % of the under-achievers are concerned with the problem: 'ATMA VISHWAS KI KAMI HONA'. A Comparison with the corresponding percentage of the over-achievers on this area shows a significant difference. In this area the differences are significant on two more problems: SABHI BATON KO BAHUT GAMEBHIRTA PURVAK SOCHANA AUR KARNA', and 'PRAEYATNA KARNE PAR BHI BAHUT SE KAMON ME SAPHAL NA HO PANA'. But on the former the over-achievers have higher percentage i.e. the problem is more prevalent among them. Besides, one problem from each of the following areas show significant differences of percentages: SPR, GTP, HF, FVE, and FLE. The problems corresponding to the above areas are: 'AMHIK LOK PRIYA HONE KI GHAAH HONA' (SPR-47.95 per cent) AWASHYAK FUSTAKON KO PRAPT KARNE ME KATHINAI HONA'.
(GTP-40.41%).

' MATA PITA KA MUJHESE BAHUT ADHIK AASHA RAKHNA'
(HF-38.36 per cent) 'APNI VYUSAIK YOGYTA KO JANNE
KI AVYASHAKTA HONA' FVE-33.56 per cent) 'BAHUT SI AARTHIK
SAMSYAEN HONA' (FIE -32.88).

On other problems checked frequently by
under-achievers the differences are not significant.
Perhaps, the impact of these not significant
problems may be alike both on the under- and the
over-achievers.

Rank Order, Frequencies, And Percentages of 25 Problems Most frequently checked by Over-Achievers (Maths Group- A.B. & C Institutions) on the MPCL AND Their comparison on the Items with the corresponding percentages of Under-achievers.

S.No. Item No. on MPCL	PROBLEMS	Category	OVER-ACHIEVERS N= 108			UNDER-ACHIEVERS N= 146			Level of significance
			Frequency	Percentages	Rank order	Frequency	Percentages	Rank Order	
56	कृता एक और स्वयं न होना कि होना चाहिए	HPD	48	44.44	1	64	43.84	3	NS
54	एक बौद्धों को बहुत मीठा पूर्वक सोचना और करना	PPR	47	43.52	2	46	31.51	15	.05
51	एक के स्थान पर वचन में प्रतिनाह होना	OTP	39	36.11	3	43	29.45	17	NS
73	बलिष्ठ होकर प्रिय होने की चाह होना	SPE	38	35.19	4	70	47.95	2	.05
5	क्योंकि शारीरिक व्यायाम का न होना	HPD	36	33.33	5	51	34.93	10	NS
200	कृत बलिष्ठ शारीरिक श्रम का होना	SEA	35	32.41	6	54	36.99	9	NS
261	परीक्षाओं के लिए परीक्षा होना	ACW	35	32.41	6	60	41.60	5	NS
67	वर्षे व्यवसाय के समय का वक्ता उपयोग न कर करना	SEA	34	31.48	7	47	32.19	14	NS
44	प्रभावकारी होने से वचन करने की विधि को न जानना	ACW	33	30.56	8	63	43.15	4	.05
58	हर में कभी-कभी सीढ़ा होना या शारीरिक क्षमता करना	HPD	33	30.56	8	48	32.88	13	NS

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S.No.	Item No. on R.P.C.	PROBLEMS	Gate- gory	OVER-ACHIEVERS N=108		UNDER-ACHIEVERS N=146		Level of Signifi- ficance		
				Freq- uency	Percen- tages	Bank order	Freq- uency		Percen- tages	Bank order
14	35	बावश्यक पुस्तकों को प्राप्त करने में कठिनाई होना	OTP	31	28.70	9	59	40.41	6	.05
15	35	विद्यालय में मनोरंज की सुविधा का अभाव होना	OTP	31	28.70	9	39	26.71	19	NS
16	1	वर्षाकाल समय ध्यान अनुमति करना	HPD	30	27.78	10	50	34.25	11	NS
17	35	माया पिता का भेरे लिए बहुत अधिक स्थान करना	HP	29	26.85	11	50	34.25	11	NS
18	268	कालेज की पहचान के बाद बांगे स्था करे इस विषय में	FPE	29	26.85	11	24	16.44	21	NS
19	151	वर्षाकाल में अधिक समय न दे पाना	ACW	29	26.85	11	60	41.60	5	.05
20	11	मनोरंज के लिए प्रयाप्त समय न होना	SRA	28	25.93	12	45	30.82	16	NS
21	206	समय पर अध्ययन शुरू न कर पाना	ACW	27	25.00	13	63	43.15	4	.01
22	231	केल क्ल में खेलना का अभाव होना	SRA	27	25.00	13	21	14.38	22	NS
23	115	शारीरिक दृष्टि से बहुत वाकफिक न होना	HPD	26	24.07	14	17	11.64	23	.05
24	243	वाल्स विस्थाप की करी होना	FPE	26	24.07	14	71	48.63	1	.01
25	216	कालेज में बहुत बड़ी होना	OTP	26	24.07	14	46	31.51	15	NS
26	123	लोगों से परित्यक्त होने में बहुत सुलभ होना	SRA	25	23.15	15	16	10.96	24	.01
27	165	वर्षाकालों का विचारधर्मों की मानवार्थों का स्थावर न करना	OTP	25	23.15	15	14	9.59	25	.01
28	65	बहुत की वार्षिक समारोह होना	FLS	22	20.37	16	48	32.88	13	.05

Table IV. 10 presents rank order, frequencies and percentages of twenty five problems most frequently checked by Over-achievers from A, B & C (Maths group). Problems put in order of descending frequencies reflect the concern of over-achievers about specific problems. They have identified five problems each in the areas of HPD, SRA and OTP, and four in the area of ACW, two from PPR and one each from SPR, HF & FVE. Problems corresponding to items 21, 73, 41, 55, 151, 206, 115, 243, 123, 165 and 65 differentiate the over-, and under-achievers significantly. But the over-achievers have obtained higher percentage on the following problems only:

'SBHI BATON KO BAHUT GAMBHIRTA PURVAK SOCHNA AUR KARNA' (Item 21-PPR), 'SHARIRIK DIRISTI SE BAHUT AKARSHAK NA HONA'. (Item 115-HPD), 'LOGON SE PARICHAY BARDHANE ME SUST HONA' (Item 123-SRA) 'ADHYAPKON KA VIDYARTHEON KI BHAVNAON KA KHYAL NA KARNA (Item 165-OTP). Possibly, these problems vex the over-achievers.

44.44 % have expressed their concern about the problem " UTNA SABAL AUR SWASTHYA NA HONA JITNA KI HONA CHAHIYE" in the HPD area. But the intensity of this problem is almost the same for the Under- as well as the over-achievers.

TABLE IV- 11

Rank Order, Frequencies, and Percentages of 25 problems Most Frequently Checked by Under-Achievers (Biology Group - A, B & C Institutions) on the MPOL and their Comparison on the items with the corresponding percentages of Over-Achievers.

S.No.	Item No. on MPOL	PROBLEMS	Categ-ory	UNDER-ACHIEVERS N=64			OVER-ACHIEVERS N= 37			Level of Significance of C.R.
				Freq- uency	Perce-ntages	Rank order	Freq- uency	Perce-ntages	Rank order	
1	69	वर्षी मानसिक उत्पत्ति की इच्छा रहना	SRA	32	50.00	1	5	13.51	13	.01
2	21	सभी बाजों को बहुत गंभीरता पूर्वक सोचना और करना	PPR	31	48.44	2	15	40.54	3	NS
3	208	अपने विचारों का ठीक से खुदों में व्यक्त न कर पाना	AOW	29	45.31	3	8	21.62	10	.05
4	71	यह इच्छा करना कि व्यक्ति त्व अधिक प्रसन्नचित हो	SER	25	39.06	4	13	35.14	5	NS
5	55	बावश्यक पुस्तकों को प्राप्त करने में कठिनाई होना	OTF	25	39.06	4	7	18.92	11	.05
6	41	प्राप्तकारी ढंग से अध्ययन करने की विधि को न जानना	AOW	22	34.38	5	14	37.84	4	NS
7	243	वास्तवविश्वास की कमी होना	PPR	21	32.81	6	21	2.70	17	.01
8	35	याता पिता का पैरों लिए बहुत अधिक त्याग करना	HP	21	32.81	6	20	54.05	1	.05
9	51	रस्ते के स्थान पर अध्ययन में कठिनाई होना	OTF	20	31.25	7	11	29.73	7	NS
10	206	समय कर अध्ययन पूरा न कर पाना	AOW	19	29.69	8	2	5.41	16	.01

S.No.	Item No. on MPCL	PROBLEMS	Category	UNDER-ACHIEVERS N= 64 Frequency	PERCENT- ages	BANK order	OVER-ACHIEVERS N= 57 Frequency	PERCENT- ages	BANK order	Level of Significance of G.R.
11	261	परीक्षाओं के लिए प्रवेश्य रहना	ACW	18	28.13	9	9	24.32	9	NS
12	52	कक्षा के बाहर अध्ययन के लिए सम्युक्त स्थान न होना	CTP	17	26.56	10	10	27.03	8	NS
13	164	अध्यापकों का विचारधर्मों में रुचि न रखना	CTP	17	26.56	10	9	24.32	9	NS
14	267	बहुत बड़ों सामाजिक जीवन का होना	SEA	16	25.00	11	9	24.32	9	NS
15	151	अध्ययन में अधिक समय न दे पाना	ACW	15	23.44	12	1	2.70	17	.05
16	216	सगारें बहुत बड़ी होना	CTP	15	23.44	12	16	43.25	2	.05
17	217	कक्षा में पर्याप्त विचार विमर्श की कमी होना	CTP	24	21.88	13	3	8.11	15	NS
18	228	मनोरंजन के लिए बहुत कम पैसे का होना	FLB	13	20.31	14	4	10.80	14	NS
19	210	कक्षा में विचार विमर्श के समय बोलने से डरना	ACW	13	20.31	14	12	32.43	6	NS
20	54	माध्यम पुस्तकों को समझने में कठिनाई होना	CTP	11	17.19	15	1	2.70	17	.05
21	65	बहुत सी वार्षिक समीक्षाएं होना	FLB	11	17.19	15	6	16.22	12	NS
22	234	माता-पिता का भरोसा विषय में बहुत सा निर्णय लेना	HF	10	15.63	16	10	27.03	8	NS
23	78	बहुत बराबरी से स्वात्साह होना	PPR	10	15.63	16	5	13.51	13	NS
24	263	अधिक दूरी से लगे विद्यार्थी करने में संकोच होना	ACW	10	15.63	16	2	5.41	16	NS
25	118	कम के सम्बन्ध में परिवार का चिन्तित होना	FLB	9	14.06	17	5	13.51	13	NS

Table IV. 11. presents twenty five most frequently checked problems by the under-achievers of the Biology group from A.B.&C.

Fifty percent of the subjects in this group have checked (Item 69-SRA), 'APNI MANSIK UNATI KI KAKSHA KARNA'. As compared to over-achievers the difference of percentage is significant beyond .01 level. The percentage of the under-achievers is high on this problem. In comparison to over-achievers^s

larger number of Under-achievers have selected the following problems. The differences are significant beyond .05 or .01 level. 'APNE VICHARON KO SHABDON ME THEEK SE VYAKTA NA KAR PANA' (Item 208 -ACW),

'ACWASHYAK PUSTAKON KO PRAPT KARNE ME KATHINAI HONA' (Item -55 OTP), 'AATMA VISHWAS KI KAMI HONA' (Item 243-PFR), 'SAMAI PAR ADHYAN PURA NA KAR PANA (Item 151-ACW), 'KAKSHA ME VICHAR VIMARSH KESAMAI BOLNE SE DARNA' (Item 210-ACW)

Other items on which significant differences between the percentages have been obtained reveal problems for the over-achievers and have been listed with the findings for the over-achievers. The remaining not significant problems are felt alike by Under- as well as the over-.

The underachievers have selected seven problems each from ACW and OTP, and three from FLE.

TABLE IV. 12

Rank Order, Frequencies and Percentages of 25 Problems Most Frequently Checked by Over-Achievers (Biology Group-A, B & C Institutions) on the MPCL and their Comparison on the Item with the Corresponding Percentages of Under-Achievers.

S.No. Item No on MPCL	PROBLEMS	Category	OVER-ACHIEVERS N=37			UNDER-ACHIEVERS N=64			Level of Significance of O.R.
			Frequency	Percentage	Rank order	Frequency	Percentage	Rank order	
1	35 माता पिता का भेरे लिए बहुत त्याग करना	HF	20	54.05	1	21	32.81	6	.05
2	216 कक्षाएं बहुत बड़ी होना	CTP	16	43.25	2	15	23.44	12	.05
3	165 व्याक्तियों का विचारधारा की मावनाओं का स्थापन करना	CTP	15	40.54	3	8	12.50	18	.01
4	21 सभी बातों को बहुत गंभीरता पूर्वक सोचना और करना	PPR	15	40.54	3	31	48.44	2	NS
5	41 प्रभावकारी ढंग से व्यक्त करने की विधि न जानना	AGW	14	37.84	4	22	34.38	5	NS
6	71 यह इच्छा करना कि व्यक्ति स्वयं प्रयत्नशील हो	SPR	13	35.14	5	25	39.06	4	NS
7	218 कक्षा में विचार-विमर्श के समय बोलने से डरना	AGW	12	32.43	6	13	20.31	14	NS
8	31 रहने के स्थान पर अध्ययन में रुचिनाई होना	CTP	11	29.73	7	20	31.25	7	NS
9	52 कक्षा के बाहर अध्ययन के लिए उपयुक्त स्थान न होना	CTP	10	27.03	8	17	26.56	10	NS
10	254 माता-पिता का भेरे विषय में बहुत से निर्णय लेना	HF	10	27.03	8	10	15.63	16	NS

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S.No	Item No on MPCL	PROBLEMS	Category	OVER-ACHIEVERS N= 37			UNDER-ACHIEVERS N= 64			Level of Significance of C.R.
				Frequ- ency	Percen- tages	Rank order	Frequ- ency	Percen- tages	Rank order	
11	260	बच्चाओं का विषाधीयों में रुचि न रहना	CTP	9	24.32	9	17	26.56	10	NS
12	261	परिप्रायिकों के लिए प्रोशान रहना	ACW	9	24.32	9	18	28.13	9	NS
13	262	बहुत बौद्धा सामाजिक जीवन का होना	SBA	9	24.32	9	18	25.00	11	NS
14	263	बच्चे विषाधीयों को खुशों में डीक से बचाने का होना	ACW	8	21.62	10	29	45.31	8	.05
15	264	बच्चे बचक बुराईयों को प्राप्त करने में बड़ियाई होना	CTP	7	18.92	11	25	39.06	4	.05
16	265	बहुत सी बालिका संरक्षायें होना	FLB	6	16.22	12	11	17.19	15	NS
17	266	बहुत बालिका से बचकालिक होना	PPR	5	13.51	13	10	15.63	16	NS
18	267	बच्चे के प्रत्यक्ष में परिवार का विविध होना	FLB	5	13.51	13	9	14.06	17	NS
19	268	बच्चे का प्रत्यक्ष में उन्नति की हल्का करना	SBA	5	13.51	13	32	50.00	1	.01
20	269	बच्चे का प्रत्यक्ष में लक्ष्य तक न पहुंच पाना	FVE	4	10.80	14	7	10.94	19	NS
21	270	बच्चे के लिए बहुत कम पैसों का होना	FLB	4	10.80	14	13	20.31	14	NS
22	271	बच्चे में बालिका विचार विमर्श की कमी होना	CTP	3	8.11	15	14	21.88	13	NS
23	272	बहुत बालिका सामाजिक जीवन का होना	SBA	3	8.11	15	8	12.50	18	NS
24	273	बच्चे पर बचकालिक न पुरां कर पाना	ACW	2	5.41	16	19	29.69	19	.01
25	274	बच्चे के लिए बच्चे के बच्चे में बचकालिक होना	ACW	2	5.41	16	10	15.63	16	NS

Table IV. 12 presents twenty five most frequently checked problems by the over-achievers of the Biology group. On seven problems out of the twenty-five, difference between percentages obtained by over-and under-achievers are significant beyond .05 or .01 level. On three of these seven problems, the over-achievers have higher percentages and on the remaining four the under-achievers are high, possibly suggesting specific problems that vex them and contribute to their differential achievement. The three problems that trouble the over-achievers of the Biology group are: 'MATA PITA KA MERE LIYE BAHUT TYAG KARNA'- (54.05 %; Item 35-HF), 'KAKCHAEN BAHUT BARDI HONA' (43.25 %; Item 216 -CTP), 'ADHEAPKON KA VIDYARTHION KI BHAVNAON KA KHEYAL NA KARNA' (40.54 %; Item 165 -CTP).

The remaining problems have the same press for both the achievement groups.

TABLE IV. 13

Rank Order, Frequencies, And Percentages of 25 Problems Most Frequently checked by Under-Achievers (Maths Group-Associated Colleges) on the MPOL And their Comparison on the Items with the corresponding Percentages of Over-Achievers

S. No.	Item No on MPOL	PROBLEMS	Category	UNDER-ACHIEVERS N=16		OVER-ACHIEVERS N=12		level of significance of G.R.
				Prequ-ency	Peren-tages	Prequ-ency	Peren-tages	
1	1	वर्कशीट समय थकान खुलव करना	HPD	12	75.00	1	41.67	3 NS
2	55	बावस्थक पुस्तकों को प्राप्त करने में कठिनाई होना	CTP	10	62.50	2	41.67	3 NS
3	9	घन का प्रबन्ध उचित रूप से न कर सकना	FLB	9	56.25	3	33.33	4 NS
4	41	प्रभावकारी ढंग से वाक्यस विधि न जानना	ACW	9	56.25	3	25.00	5 NS
5	42	कपड़े काटने से वासानी से ध्यान हट जाना	ACW	8	50.00	4	25.00	5 NS
6	47	अवसाय चुनाव में अपनी बुझिमानी पर संदेह करना	FYE	7	43.75	5	33.33	4 NS
7	26B	सिद्धान्तों और सूत्र विचारों को जल्दी न समझ सकना	ACW	6	37.50	6	00.00	8 .05
8	20B	कपड़े विचारों को खुदों में ठीक से व्यक्त न कर सकना	ACW	6	37.50	6	00.00	8 .05
9	35	माता-पिता का भरोसा बहुत त्याग करना	HF	5	31.25	7	16.67	6 NS
10	11B	घर के सम्बन्ध में परिवार का चिन्तित होना	FLB	5	31.25	7	66.67	1 .05

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S.No. Item No. on MPOL	PROBLEMS	Categor-ory	UNDER-ACHIEVERS N= 16			OVER-ACHIEVERS N= 12			Level of Significance of C.R.
			Frequ-ency	Percen-tages	Rank order	Frequ-ency	Percen-tages	Rank order	
11	160 धैर्यक सेवा में रुचि रहना	FVE	5	31.25	7	3	25.00	5	NS
12	206 समय पर व्ययमन पूरा न कर सकना	AGW	5	31.25	7	1	8.53	7	NS
13	40 उपासा और प्रार्थना के मूल्यों पर संदेह करना	MR	4	25.00	8	3	16.67	6	NS
14	65 बहुत ही वार्षिक समस्याएँ होना	FLB	4	25.00	8	2	16.67	6	NS
15	154 नोट लेने में या रूप लेना जानने में कठिनाई अनुभव करना	AGW	4	25.00	8	0	0	8	NS
16	217 कक्षा में पर्याप्त विचार विमर्श की कमी होना	GTP	4	25.00	8	1	8.33	7	NS
17	216 कक्षा में बहुत कड़ी होना	GTP	3	18.75	9	1	8.33	7	NS
18	64 स्वातन्त्रिय शिक्षा के लिए धन की आवश्यकता होना	FLB	3	18.75	9	2	16.67	6	NS
19	179 शिक्षाचार सुधारने की इच्छा रहना	SRA	3	18.75	9	2	16.67	6	NS
20	164 अध्यापकों का विचारधारा में रुचि न रहना	GTP	3	18.75	9	3	25.00	5	NS
21	319 गणित में कमजोर होना	AGW	3	18.75	9	1	8.33	7	NS
22	106 विचारधारा की आवश्यकताओं के प्रति कठिण का उदासीन होना	GTP	3	18.75	9	0	0	8	NS
23	268 कठिण की कठिनाई के बाद जाने क्या करें इस विषय में सुझाव की इच्छा करना	FVE	3	18.75	9	2	16.67	6	NS
24	54 पाठ्य पुस्तकों को समझने में कठिनाई होना	GTP	2	12.50	10	1	8.33	7	NS
25	21 सभी बातों को बहुत गंभीरता पूर्वक सोचना व करना	PPR	2	12.50	10	6	50.00	2	.05

Table IV. 13 shows that 75 % of the under-achievers from the associated colleges (Maths group) have expressed that they have the problem of "ADHIKANSH SAMAI THAKAN ANUBHAV KARNA". But the difference of percentage on this item between the under- and the over- is not significant. It is observed from the table that differences are significant only on four problems : 'sidhanton aur MOOCHAM VICHARON KO JALDI NA SAMAJH SAKNA' (Item 262 - ACW -37.5 % under -high), 'APNE VICHARON KO SHARDON ME THEEK SE VYAKTA NA KAR SAKNA' (Item 208 -ACW 37.5 % -under-high) These two problems suggest underachievers' concern. On the other two problems (Items 118 & 21), showing significant difference between percentages the over-achievers have higher percentage which shows that more of the over-achievers in associated colleges are troubled with ' DHAN KE SAMBANDH ME PARIVAR KA CHINTIT HONA'. On remaining twenty two problems the differences are not significant and the two different groups of achievers may be treated alike as far as those problems are concerned.

TABLE IV. 14

Rank Order, Frequencies, And Percentages of 25 Problems Most Frequently Checked by Over-Achievers (Maths Group-Associated Colleges) on the MPCL And their comparison on the items with the corresponding Percentages of Under-Achievers

S.No. Item No on MPCL	PROBLEMS	Category	OVER-ACHIEVERS N=12		UNDER-ACHIEVERS N=16		Level of Significance of G.R.		
			Frequ-ency	Perce-ntages	Frequ-ency	Perce-ntages			
1.	118 कम के सम्बन्ध में परिवार का चिन्तित होना	FLB	8	66.67	1	5	31.25	7	.05
2	21 सभी लोगों को बहुत गंभीरता पूर्वक सोचना व करना	FRP	6	50.00	2	2	12.50	10	.05
3	1 अधिकतर समय थकान अनुभव करना	HRD	5	41.67	3	12	75.00	1	NS
4	55 आवश्यक पुस्तकों को प्राप्त करने में कठिनाई होना	OTF	5	41.67	3	10	62.50	2	NS
5	234 अपनी पसन्द की चीजों पढ़ने का बहुत बड़ा काम खड़ा होना	SBA	5	41.67	3	1	6.25	11	.05
6	47 व्यवसाय करने में अपनी बुद्धिमानि पर संदेह करना	FVE	4	33.33	4	7	43.75	5	NS
7	51 रहने के स्थान पर वायकन में कठिनाई होना	OTF	4	33.33	4	1	6.25	11	NS
8	9 कम का प्रबन्ध उचित रूप से न कर सकना	FLB	4	33.33	4	9	26.25	3	N.S.
9	40 उपासना और प्रार्थना के मूल्यों पर संदेह करना	MR	3	25.00	5	4	25.00	8	NS
10	183 खेस करने की बाकत होना	SPR	3	25.00	5	1	6.25	11	NS

S.No. Item No. on MPOL	PROBLEMS	Cate- gory	OVER-ACHIEVERS N=12		UNDER-ACHIEVERS N=16		Level of Signifi- cance of CR.		
			Frequ- ency	Percen- tages	Bank order	Percen- tages		Bank order	
11	41	प्रभावकारी ढंग से अध्ययन की विधि न जानना	ACW	3	25.00	5	26.25	3	NS
12	160	ऐनिक सेना में रुचि रखना	FVE	3	25.00	5	31.25	7	NS
13	164	वध्यापकों का विद्यार्थियों में रुचि न रखना	GTP	3	25.00	5	18.75	9	NS
14	42	अपने कार्य से बावानी से ध्यान हट जाना	GTP	3	25.00	5	50.00	4	NS
15	64	स्नातकीय शिक्षा के लिए पत्र की आवश्यकता होना	FLB	2	16.67	6	18.75	9	NS
16	35	माता पिता का भरो लिए बहुत त्याग करना	HF	2	16.67	6	31.25	7	NS
17	179	शिक्षाचार सुधारने की इच्छा रखना	SRA	2	16.67	6	18.75	9	NS
18	65	बहुत ही आर्थिक समस्याएँ होना	FLB	2	16.67	6	25.00	8	NS
19	268	बुलेट की फाई के बाव क्या करें इस विषय में सलाह	PPR	2	16.67	6	18.75	9	NS
20	216	कनाडा बहुत बड़ी होना	GTP	1	8.33	7	18.75	9	NS
21	217	कनाडा में पर्याप्त विचार विमर्श की कमी होना	GTP	1	8.33	7	25.00	8	NS
22	123	हमों से परिचय करने में सुस्त होना	SRA	1	8.53	7	6.25	11	NS
23	194	यौन इच्छाओं का लक्ष्य रखना	CSM	1	8.53	7	6.25	11	NS
24	206	समय पर अध्ययन पूरा न कर सकना	GTP	1	8.53	7	31.25	7	NS
25	54	पाठ्य पुस्तकों को समझने में कठिनाई होना	GTP	1	8.33	7	12.50	10	NS

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Table IV. 14, shows the twenty five problems most frequently marked by the over-achievers in the Maths groups of the associated colleges. The problems checked by the over-achievers of this group are put in order of descending frequencies. Comparison of percentage converted from frequencies with the corresponding percentages of the over-achievers reveal that significant differences are obtained on only three of the twenty five problems. The over-achievers have selected: 'DHAN KE SAMBANDE ME PARIVAR KA CHINTIT HONA' (Item-118-FLE; 66.67 %), 'SABHI BATON KO BAHUT GAMBHIRTA PURVAK SOCHANA VA KARNA' (Item 21-PPR; 50 %), and 'APNI PASAND KI CHIJON KO PARDHNE KA BAHUT KAM AVSAR HONA' (Item 234-SRA; 41.67 %)

The over-achievers from the associated college selected eight problems from the CTP area, 4 from FLE, 3 from SRA, two from FVE & PPR and one each from SPR, CSM, HF, MR & ACW.

TABLE IV, 15

Rank Order, Frequencies, And Percentages of 25 Problems Most Frequently checked by Under-Achievers (Biology Group-Associated College) on the MPCL And their comparison on the items with the corresponding Percentages of Over-Achievers

S.NO. Item No on MPCL	PROBLEMS	Category	UNDER-ACHIEVERS N=32			OVER-ACHIEVERS N=17			Level of Significance of O.R.
			Frequency	Percentage	Rank order	Frequency	Percentage	Rank order	
1	41 प्रभावकारी ड्रग से अध्ययन करने की विधि को न जानना	ACW	22	68.75	1	5	29.41	6	.01
2	139 माता-पिता का मुँह से बहुत अधिक आशा रखना	HF	20	62.50	2	2	11.76	9	.01
3	55 आवश्यक पुस्तकों को प्राप्त करने में कठिनाई होना	OTP	18	56.25	3	3	17.65	8	.01
4	69 अपनी मानसिक उन्नति की इच्छा करना	SEA	17	53.13	4	4	23.53	7	NS
5	151 अध्ययन में अधिक समय न दे पाना	ACW	16	50.00	5	3	17.65	8	NS
6	242 किसी विषय पर निश्चय न कर सकना	PPR	15	46.88	6	5	29.41	6	NS
7	65 बहुत सी धार्मिक समस्याएँ होना	FLB	14	43.75	7	2	11.76	9	NS
8	54 पाठ्य पुस्तकों को समझने में कठिनाई होना	OTP	14	43.75	7	4	23.53	7	NS
9	2 कम बच्चे का होना	HPD	12	37.50	8	12	70.99	1	.05
10	53 अध्ययन को जारी रखना पढ़ाई कई बातों को समझने में कठिनाई होना	OTP	12	37.50	8	9	52.94	2	NS

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S.No. ITEM No PROBLEMS
on MPOL

S.No.	ITEM No	PROBLEMS on MPOL	Categor- ory	UNDER-ACHIEVERS N= 32			OVER-ACHIEVERS N= 17			Level of Signifi- cance of C.R.
				Frequ- ency	Percen- tages	Rank order	Frequ- ency	Percen- tages	Rank order	
11	243	बालम विश्वास की कमी रहना	PPR	11	34.38	9	1	5.88	10	NS
12	195	विपरीत लिंग वालों से कहाँ तक सम्बन्ध रक्ता जाय यह	CEM	11	34.38	9	-	-	-	.05
13	34	निश्चय न.का पाना परिवार में बीमारी	HP	10	31.25	10	7	-	-	NS
14	119	दूसरों पर वार्षिक निर्भरता पसंद न करना	FLE	10	31.25	10	1	5.88	10	NS
15	162	व्यापकों से व्यक्तिगत सहायता न प्राप्त कर सकना	CTP	10	31.25	10	-	-	-	NS
16	42	वर्षे कार्य से बासानी से ध्यान हट जाना	ACW	9	28.13	11	-	-	-	NS
17	207	कच्ची तरह ध्यान न लगा पाना	ACW	9	28.13	11	1	5.88	10	NS
18	31	कपड़े माता-पिता द्वारा बाजोचना किया जाना	HP	8	25.00	12	1	5.88	10	NS
19	40	उपासना और प्रार्थना के मूल्यों पर संदेह करना	MR	8	25.00	12	2	11.76	9	NS
20	164	व्यापकों का विचारधारा से रुचि न रखना	CTP	8	25.00	12	4	23.53	7	NS
21	9	घन का प्रबन्ध उचित रूप से न कर सकना	FLE	7	21.88	13	3	17.65	8	NS
22	183	बहस करने की वाक्य होना	SPR	7	21.88	13	8	47.06	3	NS
23	152	शुद्ध वक्ता बाहरी कार्य कलापों में रुचि रखना	ACW	7	21.88	13	2	11.76	9	NS
24	51	रहने के स्थान पर वाक्य में कठिनाई होना	CTP	6	18.75	14	3	17.65	8	NS
25	11	मार्गदर्शन के लिए प्रयास समय न होना	SRA	6	18.75	14	6	35.29	5	NS

Table IV. 15 shows that the under-achievers of the Biology group from the associated colleges have most frequently selected problems from the following areas in order of descending frequencies. They have expressed six problems in the CTP area, five in the ACW, three each in HF and PLE, two each in SPR and PPR and one each in HPD, SRA, CSM and MR.

68.75 % of the under-achievers have expressed that they do not follow effective method of studying 'PRABHAV KARI DHANG SE ADMEYAN KI VIDHI NA JANNA' - When the percentage obtained on this problem is compared with the corresponding % of the over achievers on it the difference is observed to be significant beyond .01 level. Significant differences are noticed ^{on the} following problems also: 'MATA PITA KA MUJHSE BANUT ADHIK ASSHA RAKHNA', 'AWASHYAK PUSTAKON KO PRAPT KARNE ME KATHINAI HONA' and 'VEEPREET LING WALON SE KAHAN TAK SAMBANDH RAKHA JAEY EH ^c NISHAY NA KAR PANA'. Perhaps these problems concern the under-achievers more than the over-achievers. Other problems concern the over-achievers or put an equal strain on both the groups.

TABLE IV. 16

Rank Order, Frequencies And Percentages of 25 Problems Most Frequently checked by Over-Achievers (Biology Group-Associated Colleges) on the MPCL and their comparison on the items with the corresponding Percentages of Under-Achievers.

S.No.	Item No. on MPCL	PROBLEMS	Cate- gory	OVER-ACHIEVERS N=17 frequ- ency	PERCENT- ages	Rank order	UNDER-ACHIEVERS N=32 frequ- ency	PERCENT- ages	Rank order	Level of Significance of G.R.
1	2	कम वक्त का होना	HPD	12	70.99	1	12	37.50	8	.05
2	53	बधाईकों द्वारा मुद्दार्ह मर्ह बातों को समझने में कठिनाई	OTP	9	52.94	2	12	37.50	8	NS
3	183	मददस करना	SPR	8	47.06	3	7	21.88	13	NS
4	35	बहरी करने की वादत होना	HF	7	41.18	4	5	15.63	15	NS
5	11	माता पिता का भेरे लिए बहुत त्याग करना	SRA	6	35.29	5	6	18.75	14	NS
6	324	मनोरंज के लिए पर्याप्त समय न होना	PVB	6	35.29	5	5	15.63	15	NS
7	41	पूर्व निर्धारित लक्ष्य तक न पहुंच पाना	ACW	5	29.41	6	22	68.75	1	.01
8	242	प्रभावकारी ढंग से वाक्यन करने की विधि को न जानना	FPR	5	29.41	6	15	46.88	6	NS
9	69	किसी विषय पर निश्चय न कर सकना	SRA	4	23.53	7	17	53.13	4	NS
10	164	वर्षी मानसिक उन्मत्ति की इच्छा करना	OTP	4	23.53	7	8	25.00	12	NS

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S.No. Item No. on MPCL	PROBLEMS	Categ-ory	OVER-ACHIEVERS N=18		UNDER-ACHIEVERS N= 32		Level of Significance of C.R.		
			Frequ-ency	Percen-tages	Rank order	Frequ-ency		Percen-tages	
11	54	उत्प	4	23.53	7	14	43.75	7	NS
12	60	HPD	3	17.65	8	4	12.50	16	NS
13	91	FILE	3	17.65	8½	7	21.88	13	NS
14	99	HF	3	17.65	8	4	12.50	16	NS
15	51	उत्प	3	17.65	8	6	18.75	14	NS
16	55	उत्प	3	17.65	8	18	56.25	3	.01
17	151	ACW	3	17.65	8	16	50.00	5	NS
18	40	MR	2	11.76	9	8	25.00	12	NS
19	65	FILE	2	11.76	9	14	43.75	7	NS
20	199	HF	2	11.76	9	20	62.50	2	.01
21	152	ACW	2	11.76	9	7	21.88	13	NS
22	119	FILE	1	5.88	10	10	31.25	10	NS
23	161	उत्प	1	5.88	10	4	12.50	16	NS
24	243	PPR	1	5.88	10	11	34.38	9	NS
25	328	उत्प	1	5.88	10	3	9.38	17	NS

Table IV. 16 shows that the over-achievers of the Biology group from associated colleges have most frequently chosen problems from the QTP, ACW, HF and FLE areas. They have identified as many as seven problems from QTP area alone, as troubling them.

Significant differences between the percentages obtained by the under-and the over-achievers on the problems, were found on four problems only. Of these problems three concerned the under-achievers as they had higher percentages on them. The only problem relevant for the over-achievers was: 'KAM WAJAN KA HONA' (Item 2 HPD: checked by 70.99 %). The difference on this problem was significant. Remaining problems have an equal impact and incidence on both the groups of achievers.

Mean and "t" Comparison on Intelligence, Attainment, Study-Habits, Study-Hours, Attitude and Self-Concept. (Over- Under- & Normals; Pooled from Institutions A, B, & C.)

VARIABLES	OVER-ACHIEVERS N = 108		UNDER-ACHIEVERS N = 146		NORMAL-ACHIEVERS N = 168		"t"	Groups Compared
	Mean	S. D.	Mean	S. D.	Mean	S. D.		
Intelligence	54.68	14.08	63.46	10.58	58.32	13.64	3.77 2.12 5.48	U - N ** N - O * O - U **
Attainment	274.94	30.37	211.20	37.82	252.99	60.18	7.47 4.00 14.89	U - N ** N - O ** O - U **
Study-Habits	32.36	13.30	27.52	10.02	28.99	11.00	1.24 2.2 3.18	U - N * N - O * O - U **
Study-Hours	3.25	1.18	3.44	.58	3.62	.52	3.00 3.08 1.58	U - N ** N - O ** O - U
Attitude	15.31	3.25	16.24	2.79	16.36	2.83	.38 2.76 2.51	U - N N - O O - U
Self-Concept	84.62	32.97	87.73	15.51	83.83	24.36	1.71 .21 .90	U - N N - O O - U

* Indicates significance of difference between the group to be beyond .05 level.

** Indicates significance of difference between the groups to be beyond .01 level.

Table IV. 17 presents mean and "t" comparison for the Maths group among Overs- Unders- and Normals- from institution A B & C, on Intelligence, Attainment, study-Habits, study- Hours, Attitude and Self-Concept. The three achievement groups differ significantly on Intelligence and Attainment. Under-achievers have higher intelligence and lower achievement as compared to over- and normal-~~achievers~~ achievers. In comparison to the Over- achievers, Normals- have higher intelligence. The over-achievers have higher attainment as compared to normals and the Under-achievers.

The groups of Over-and Under-achievers differ significantly on study-Habits. A "t" value of 3.18 is significant beyond .01 level. This suggests that in the Maths group the Over-achievers have better study-Habits as compared to Under-achievers. Similarly group difference between normal-and over- is also significant at .05 level, perhaps indicating that over-achievers are better in their study-habits even in comparison with normals. (High Score on SSNA means good study-Habits).

The study hours differentiate the groups of Under- and normal- and normal-and over-. The 't' values of 3.00 and 3.08, both, are significant beyond .01 level of confidence. The result suggests that normal-achievers put in more hours of study in comparison to the over- and Under-achievers.

A "t" value of 2.76 significant beyond .01 level, obtained between normals- and the overs- on Attitude suggests that normal achievers have more positive attitude. The attitude score represents discrepant achievers attitude towards their studies, teachers, friends and schools. On self-concept the groups are alike. Self-Concept score is obtained on the basis of the ratings on General Intelligence, Practical Intelligence, Social Intelligence, receptivity and twelve bi-polar adjectives.

TABLE IV. 18
MEAN AND S.D. COMPARISON ON INTELLIGENCE,
ATTAINMENT, STUDY-HABITS, ATTITUDE &
SELF-CONCEPT (BIOLOGY-POOLED FROM
A, B & C)

Variables	OVER-ACHIEVERS		UNDER-ACHIEVERS		NORMAL-ACHIEVERS		n	GROUPS
	Mean	S.D.	Mean	S.D.	Mean	S.D.		
	N=37		N=64		N=74			Compared
Intelligence	43.69	10.11	60.86	9.97	53.91	13.59	3.93 4.46 8.29	U-N** N-O** O-U**
Attainment	237.83	13.49	203.87	15.85	232.38	20.06	9.73 1.69 13.57	U-N** N-O O-U**
Study-Habits	29.58	9.42	28.18	10.27	29.95	10.32	1.01 .19 .72	U-N N-O O-U
Study-Hours	3.56	1.17	3.05	1.07	3.92	1.06	.75 2.9 1.75	U-N N-O** O-U
Attitude	16.35	2.93	16.32	1.83	14.96	5.57	2.00 1.73 .05	U-N N-O O-U
Self-Concept	92.38	30.21	88.43	17.15	89.61	18.62	.38 .51 .73	U-N N-O O-U

* Significant at the .05 level or beyond.

** Significant at the .01 level or beyond.

Table IV. 18 shows significant differences in the groups of Under- and Normal-, Normal- and Over-, and Over- and Under (Biology group A.B. and C institutions) on Intelligence. Attainment distinguishes significantly the groups of Under- and Normal- and Over- and Normal-. Under-achievers have higher intelligence whereas the over-achievers have higher attainment.

The groups of Over-, and Normal-Achievers differ with respect to study-hours. The Over-achievers seem to be in the habit of investing more hours to their studies that perhaps justifies their attainment, partly. Other groups (U-N) and (O-U) do not differ with regards to the 'input' in studies.

Under- and Normal-achievers differ significantly with respect to their attitudes towards Studies, Teacher, Peers and institution. Perhaps the Under-achievers show a more positive attitude as compared to Normals.

As far as self-Concept and study habits are concerned the three different achieving groups are alike. On study habits, the Normals-, and the Overs-, have higher mean as compared to Unders-,

TABLE IV. 19

Mean and 't' Comparison on Attainment, Intelligence, Study-Habits, Self-Concept, Attitude, Study-Hours between Under- & Under-achievers in the Biology and Maths group. (Pooled from ABO)

Variables	UNDER - BIOLOGY		UNDER- MATHS		t
	Mean	S.D.	Mean	S.D.	
Intelligence	60.86	9.97	63.46	10.58	1.71
Attainment	203.87	15.85	211.20	37.82	1.98 *
Study-Habits	28.18	10.27	27.52	10.02	.43
Study-Hours	3.05	1.07	3.44	.58	.61
Attitude	16.32	1.83	16.24	2.79	.25
Self-Concept	88.43	17.15	87.73	15.51	.28

* Level of Significance
↓

Table IV. 19 shows that Under-achievers from institutions A, B & C (Biology group) do not differ with Under-achievers of the Maths group from the same institution on any of the variables- viz., Intelligence, study-Habits, Self-Concept, Attitude and study-hours. The significant difference at .05 level is noticed only on Attainment, which may perhaps be due to the range of marks in two curriculums. In Maths. groups some of the subjects are considered more meriting as compared to the subjects in Biology group.

* significant beyond .05 level of confidence.

TABLE IV. 20

Mean and 't' Comparisons on Attainment, Intelligence, Study-Habits, Self-Concept, Attitude and Study-hours between Over- & Over-Achievers in the Biology and Maths groups (Pooled from ABG.)

Variables	OVER - BIOLOGY		OVER - MATHS		't'
	Mean	SD	Mean	SD	
Intelligence	43.69	10.11	54.68	14.08	5.13 **
Attainment	237.83	13.49	274.94	30.37	10.13 **
Study-Habits	29.58	9.42	32.36	13.30	1.39
Study-Hours	3.56	1.17	3.25	1.18	1.40
Attitude	16.35	2.93	15.31	3.25	1.82
Self-Concept	92.38	30.21	84.62	32.97	1.31

** Level of Significance

↓

Table IV. 20 shows that the Over-achievers from A, B & C in the two curriculums (BIO. & MATHS.) do not differ with respect to their Study-Habits, hours put in for study, Attitude and Self-Concept. Significant differences beyond .01 level are seen on Intelligence and Attainment. There is nothing surprising about the results as more intelligent students offer Maths group, and this combination is also considered to be more scoring hence the differences.

** significant beyond .01 level of confidence.

TABLE IV. 21

Mean and 't' Comparison on Intelligence,
Attainment, Study-Habits, Study-Hours,
Attitude and Self-Concept Between Under-
and Under-Achievers from Institutions
C & D (Maths group).

M A T H E M A T I C S

Variables	UNDER-ACHIEVERS N = 58		UNDER-ACHIEVERS N = 16		"t"
	Mean	Std. Dev.	Mean	Std. Dev.	
Intelligence	60.47	10.92	70.75	6.32	4.82 **
Attainment	200.67	26.45	193.94	7.38	1.71
Study-Habits	27.95	11.27	24.87	6.04	1.45
Study-Hours	3.52	.61	3.37	.62	.16
Self-Concept	88.94	17.62	93.25	12.75	1.09
Attitude	16.19	3.30	15.56	2.13	.92

** group differences significant at the .01 level of confidence.

The above table compares Under-achievers from associated colleges and a University. The Under-achievers are alike in their attainment, study-habits, hours of study that they do, Self-Concept and Attitude. Significant difference beyond .01 level is observed on Intelligence only. On this variable the under-achievers from Associated colleges have an edge over the under-achievers from the University.

TABLE IV. 22

Mean and 't' Comparison on Intelligence, Attainment, Study-Habits, Study-Hours, Attitude and Self-Concept Between the Over-Achievers from Institutions C & D Maths group.

M A T H E M A T I C S

Variables	OVER -ACHIEVERS N=37 C		OVER-ACHIEVERS N=12 D		"t"
	Mean	Std. Dev	Mean	Std.Dev.	
Intelligence	57.51	15.61	47.33	7.99	2.95 **
Attainment	287.78	30.45	244.92	18.55	5.84 **
Study-Habits	28.11	12.67	35.33	8.34	2.27 *
Study-Hours	3.49	1.23	3.75	1.01	.74
Attitude	15.19	2.93	16.42	1.86	1.70
Self-Concept	87.81	29.52	98.91	13.31	1.50

Table IV. 22 compares over-achievers from a University and the associated colleges in Mathematics Curriculum. Besides Intelligence and Attainment, the over-achievers from two sources differ in their study-Habits. The differences are significant at the .01 level on Intelligence and Attainment, and at the .05 level on Study-Habits. The over-achievers of Mathematics groups from associated colleges have better study-habits as compared to the Over-achievers from ^{the} University (C). No difference is observed on any of the other variables studied in this table.

TABLE IV. 23

Mean and 't' Comparison on Intelligence,
Attainment, Study-Habits, Study-Hours,
Attitude and Self-Concept Between Under-
and Under- Achievers from Institutions
C & D (Biology group)

B I O L O G Y

Variables	UNDER-ACHIEVERS N=45, C		UNDER-ACHIEVERS N=33, D		"t"
	Mean	Std.Dev.	Mean	Std.Dev.	
Intelligence	60.90	9.07	59.67	10.36	.54
Attainment	203.24	16.62	200.27	18.37	.73
Study-Habits	28.86	8.08	28.09	9.46	.37
Study-Hours	3.15	1.15	3.16	.72	.01
Attitude	16.52	1.77	16.09	1.92	1.02
Self-Concept	91.04	14.05	93.69	11.44	.92

Not significant "t" values on all the variables in the above table reveal that underachievers of the Biology group from a University and the associated colleges are similar in their Intelligence, Attainment, Study-habits, study-hours, self-concept and Attitude. Mean ^{values}, too, on all the variables are almost equal.

TABLE IV. 24

Mean and 't' Comparison on
Intelligence, Attainment,
Study-Habits, Study-Hours,
Attitude and self-Concept Between
the Over-Achievers from Institution
C & D -(Biology group)

B I O L O G Y

Variables	OVER-ACHIEVERS N=24, C		OVER-ACHIEVERS N=16 D		"t"
	Mean	Std.Dev.	Mean	Std.Dev.	
Intelligence	40.74	5.91	37.43	7.39	1.50
Attainment	234.91	12.27	256.00	18.94	3.96 **
study-Habits	28.32	6.16	35.18	6.63	3.29 **
study-Hours	3.37	.92	2.81	.95	.58
Attitude	16.58	2.50	16.37	2.83	.24
Self-Concept	95.32	32.95	97.06	8.69	.29

The above table reveals that over-achievers from an University and the associated colleges (Biology group) differ on Attainment and Study-Habits. The difference is significant beyond .01 level. The over-achievers from associated colleges have better study-habits (indicated by higher mean on this variable) and are also high in attainment. Other variables under-study do not differentiate the over-achievers from C & D. They may be deemed alike.

* group differences significant at the .05 level

** group differences significant at the .01 level.

TABLE IV. 25.

Percentage - Comparisons on College/University Education; Curricular, Co-curricular and other Interests and Future Plans between Under-, Over- and Normal-Achieving in Institutions A, B, C, combined- (Biology Group)

	UNDER-,	OVER-,	NORMAL-,
Variables	Percentages	Percentages	Percentages

College/University
Ki Shiksha

'AAP KI RUCHI SAB SE
KAM KIS VISHAY/KIN
VISHAON ME HAI'

CHEMISTRY	35.02 %	39.68 %	46.57 %
Zoology	23.95 %	34.12 %	32.21 %
Botany	48.34 %	27.77 %	22.93 %

'KIS VISHAY ME/KIN
VISHAON ME APKO (a)
A DHYAPAN THEEK SE
SAMAJH ME NAHIN
AATA'

CHEMISTRY	48.00 %	73.07 %	64.01 %
Zoology	10.00 %	8.33 %	15.53 %
Botany	8.66 %	18.59 %	17.42 %

(b) 'ADHYAPAK KI
VYAKTAGAT SAHAYATA KI
AAVISHAKTA PARDTI HAI'

CHEMISTRY	25.94 %	19.44 %	35.55 %
Zoology	13.25 %	27.77 %	17.77 %
Botany	31.13 %	19.44 %	13.33 %

KEYA BAHUT DINON/TAK
SCHOOL SE ANOOPSTHIT HONE
PAR/ROZ KI PARDHAI ME ANEERAMIT
HONE PAR/EYA, PRARMBHIK VISHAON
KO PARDHE BAHUT DIN HO JANE KE KARN-AAPKO
APNE ANDER KAMI MENBOS HOTI RAHTI HAI ?

Seldom	21.98 %	36.58 %	30.42 %
Sometimes	38.94 %	35.18 %	30.05 %
Frequently	18.28 %	5.09 %	17.80 %
Generally	10.84 %	9.26 %	6.81 %
Always	9.93 %	20.55 %	14.14 %

contd..

Variables	Under+, Percentages	Over-, Percentages	Normal-, Percentages
<u>KEYA SAIR-SAPATA/GAPPBAZI/AADHIK CINEMA/ DEKHNA/SAMAJIK JEEVAN SE ADHIK LAGAV RAKHA/NETAGIRI/AESI PUSTAKEN PARDHANA JINKA PATHYA VISHRON SE KOI SAMBANDH NA HO- AAP KI PARDHAI KI SAPHALTA ME BADHA PAHUCHATE HAIN ?</u>			
Seldom	24.67 %	23.61 %	40.66 %
Sometimes	28.77 %	50.00 %	36.19 %
Frequently	13.67 %	3.70 %	9.21 %
Generally	11.08 %	10.64 %	6.06 %
Always	9.23 %	12.03 %	7.11 %
<u>'KISSE KOD ME DILCHASPI'</u>			
Indoor	3.03 %	13.01 %	13.75 %
Outdoor	96.97 %	86.99 %	86.25 %
<u>HOBBY</u>			
Studying	34.44 %	13.63 %	25.71 %
Stamp-Collection	-	3.01 %	2.08 %
Photography	5.58 %	21.21 %	10.00 %
Sports	8.89 %	9.09 %	13.37 %
Gardening	2.23 %	4.54 %	-
Teaching	-	-	2.34 %
Politics	8.33 %	-	-
Other hobbies	42.84 %	43.93 %	25.31 %
<u>READING INTERESTS</u>			
DETECTIVES	42.31 %	32.54 %	35.40 %
NOVEL	43.74 %	15.55 %	18.06 %
STORIES	63.85 %	77.30 %	55.45 %
CONCERNING SCIENCE	2.22 %	-	-
<u>EXTRA-CURRICULAR ACTIVITIES</u>	38.89 %	38.89 %	48.14 %
NOC. & SOCIAL SERVICE	59.25 %	33.33 %	51.85 %
<u>BIAVISHYA KI YOJNA</u>			
1. Academic Courses	55.55 %	24.44 %	36.63 %
2. LL.B	-	-	.75 %
3. Teacher's Training	.74 %	32.22 %	7.95 %
4. Technical/Medical	43.70 %	12.77 %	49.05 %
5. Other courses or professional Trg.	-	-	-

* N is not the same for all variables.

** Errors due to approximation have not been rectified.

Quantitative results have also been obtained on some items of the Personal Data schedule. The frequencies on the items have been converted into percentages to compare the groups of Under-, Over- and Normal-Achievers.

Table IV. 25., compares Under-, Over- and Normal-Achievers in the Biology group. On item 'AAP KI RUCHI SAB SE KAM KIS VISHAY KIN VISHEON ME HAI':- Comparatively larger number of normal-achievers followed by Over-achievers (46.57 % & 39.68 %) have shown their disinterest in chemistry. More over-achievers (34.12 %) have expressed their lack of interest in Zoology (This percentage is higher as compared to unders- and Normals). But most of the Under-achievers (48.34 %) have given out that they are less interested in Botany. For Under-achievers, the next subject that ranks high to claim their lack of interest, is chemistry.

On item, 'KIS VISHAY ME/KIN VISHEON ME AAPKO (a) & 'ADHYAPAK THEEK SE SAMAJH ME NAHIN AATA', (b) 'ADHYAPAK KI VYAKTAGAT SAHAYATA KI AAVVSHAKTA PARDHI HAI'- the over and the normal-achievers appear to be more sensitive in identifying their academic difficulties. On part (a) of the item, 73.07 % of the over-achievers and 64.01 % of the normals, have expressed that they did not understand the teaching in chemistry. More normals 15.53 % are again, expressive in pointing out their learning difficulties in the subject area of Zoology. Botany teaching is also not understood by the over-and

the normal-achievers (18.59 % and 17.42 % respectively).

Larger number of normal achievers (35.55 % and the over-achievers 27.77 %) have expressed the need for individual help of the teachers in the subject areas of Chemistry (normals) and Zoology (overs). More of the under-achievers 31.13 % needed individual help in Botany.

On item, 'KEYA BAHUT DINON TAK ISKOOL SE ANOOPASTHIT HONE PAR/ROZ-KI PARDHAI ME ANEEMIT HONE PAR /EYA PRARMBHIK VISHEON KO PARDHE BAHUT DIN HO JANE KE KARAN-AAP KO APNE ANDER KAMI MEHSOOS HOTI RAHTI HAI ?' Larger number of over-achievers 35.57 % and Normals-, (30.42 %) seldom experience the strain on their studies due to the conditions enumerated in this item. More of the under-achievers experience the effect of these conditions sometimes, frequently and generally. (20.55 % of the over-achievers have rated the item on 'Always'). Perhaps they are quite sensitive and whenever they have been confronted with conditions that ~~ikur~~ effect their studies, they grew quite conscious of ^{their} losses. May be, that this consciousness made them more keen to make their losses up.

Similarly, more under-achievers suffer losses frequently and generally in their studies due to Gair-Sapata/ Gappbasi/ Adhik Cinema Dekhna/ Samajik Jeevan se Adhik Lagav Rakhna/ Netagiri/ Aisi pustaken Parāhāna Jinka Pathya visheon se koi sambandh na ho'. More normals- (40.66 %) and more overs- (50 %) have rated on 'seldom'

and 'sometimes' respectively. 12.83 % of the over-achievers have given the rating 'Always' on this item. This percentage is highest in comparison to that of unders- and Normals-. Again, possibly, the Over-achievers have been very sensitive to realise the loss due to the conditions enumerated in the item. Whenever they faced them, they felt it more and perhaps worked their best to neutralise the adverse effect experienced by these hampering conditions, habits or ways of life.

Most of the under-achievers (96.97 %) have been interested in outdoor games. Possibly this consumed much of their time or became their first love.

34.44 % of the Underachievers expressed that their hobby was reading. Of this only 2.22 % read science or other books, rest were delighted more with the reading of detectives, xx stories or novels.

8.33 % of the Under-achievers gave out that their hobby was politics. Again, more under-achievers 59.25 % took part in social-Services, NCC etc. But more of the normal-achievers participated in extra-curricular activities.

Large number of under-achievers 55.55 % wanted to go in for academic courses after graduation. More of the over-achievers (32.22 %) wanted to join teachers-training. 49.05 % of the Normal-Achievers wanted to join medical profession. Just likely, that this group may be having better goal-orientation.

TABLE IV. 26.

Percentage -Comparisons, on College/University Education Curricular, Co-curricular and Other Interests And Future Plans between Under-, Over- and Normal-Achievers In Institutions A,B,C Combined (Maths Group).

Variables	UNDER-, Percentages	OVER-, Percentages	NORMAL-, Percentages
<u>College/ University</u>			
<u>Ki Shiksha</u>			
<u>'AAP KI RUCHI SABSE KAM</u>			
<u>KIS VISHAY KIN VISHAEON/ME</u>			
<u>HAI'</u>			
CHEMISTRY	51.93 %	51.09 %	59.25 %
PHYSICS	24.73 %	16.39 %	18.95 %
MATHEMATICS	28.84 %	21.56 %	23.72 %
<u>'KIS VISHAY ME/KIN VISHAEON</u>			
<u>ME APKO: (a) ADHYAN THEEK SE</u>			
<u>SAMAJH NAHIN AATA'?</u>			
CHEMISTRY	28.96 %	54.40 %	32.39 %
PHYSICS	33.34 %	28.48 %	39.78 %
MATHEMATICS	49.91 %	25.22 %	37.15 %
<u>(b) 'ADHYAPAK KI VYAKTAGAT SAHAYTA</u>			
<u>KI AAVSHYAKTA PARDHI HAI?</u>			
CHEMISTRY	28.69 %	37.82 %	34.77 %
PHYSICS	27.90 %	28.78 %	30.08 %
MATHEMATICS	55.00 %	35.48 %	33.23 %
<u>KEYA BAHUT DINON TAK SCHOOL SE ANOOPASTHIT</u>			
<u>NONE PAR/ROZ KI PARDHAI ME ANERMIT HONE PAR</u>			
<u>PRARAMBHIK VISHEON KO PARDHE BAHUT DIN HO JANE</u>			
<u>KE KARAN-AAP KO APNE ANDER KAMI MEHSOOS HOTI</u>			
<u>RAHTI HAI ?</u>			
Seldom	17.74 %	25.78 %	29.25 %
Sometimes	43.29 %	36.12 %	33.84 %
Frequently	11.58 %	15.36 %	10.65 %
Generally	9.84 %	7.22 %	12.95 %
Always	18.29 %	14.65 %	11.74 %
<u>KEYA SAIR-SAPATA/GAPP BAZI/AADHIK ONEMA DEKHNA/</u>			
<u>SAMAJIK JEEVAN SE ADHIK LAGGAY RAKHNA/NETAGIRI/AESI FUSTAKEN</u>			
<u>SAMAJIK JEEVAN SE ADHIK LAGGAY RAKHNA/NETAGIRI/AESI FUSTAKEN</u>			
<u>PARDHANA JINKA PATHYA VISEON SE KOI SAMBANDH NA HO-AAP KI</u>			
<u>PARDHAI KI SAPHALTA ME BADHA PAHUCHATE HAI? VISEON SE KOI</u>			
<u>SAMBANDH NA HO-AAP KI PARDHAI KI SAPHALTA ME BADHA PAHUCHATE</u>			
<u>HAI?</u>			
Seldom	32.88 %	45.81 %	51.12 %
Sometimes	32.39 %	34.99 %	23.34 %
Frequently	11.72 %	6.94 %	8.10 %
Generally	8.87 %	5.62 %	10.31 %
Always	2.82 %	8.32 %	4.88 %

contd....

Variables	UNDER-, Percentages	OVER-, Percentages	NORMAL ² , Percentages
<u>'KHEL KOOD ME DILCHASPI'</u>			
Indoor	4.16 %	13.95 %	37.82 %
Out door	95.83 %	85.71 %	61.15 %
<u>HOBBY</u>			
Studying	30.97 %	29.36 %	40.18 %
Stamp Collection	13.37 %	5.65 %	8.66 %
Photography	9.17 %	5.63 %	1.73 %
Sports	7.32 %	3.82 %	12.41 %
Other Hobbies	19.41 %	30.95 %	35.83 %
Politics	8.50 %	-	1.21 %
<u>READING INTERESTS</u>			
1. Best Detective	57.78 %	48.42 %	67.47 %
2. Novels	18.43 %	8.65 %	13.97 %
3. Stories	68.07 %	71.74 %	48.94 %
<u>MEMBERSHIP OF POLITICAL PARTIES</u>			
	6.06 %	-	-
<u>EXTRA-CURRICULAR ACTIVITIES</u>			
Extra-Curricular Activities	60.32 %	80.44 %	45.68 %
NCC & Social Service	34.08 %	24.68 %	60.87 %
<u>FUTURE PLAN</u>			
Academic Courses	63.19 %	65.76 %	82.97 %
L.L.B.	4.08 %	-	2.82 %
Teacher Training	7.20 %	16.31 %	4.54 %
Technical/Medical	21.20 %	17.66 %	18.81 %
Army...	2.38 %	-	1.69 %

*N is not the same for all variables.

** Errors due to approximation have not been rectified.

Table IV. 26 compares Under-, Over- and Normal-Achievers of the Maths. group on some items of the personal data schedule. In the area of College/University ki Shiksha, more Normal-Achievers have expressed their lack of interest in ~~Science~~ Chemistry. The groups of Unders- and Overs seem to be alike so far as this subject is concerned. Larger number of under-achievers (24.73 %) (as compared to Overs- and Normals) have expressed their disinterest in physics. 28.84 % of under-achievers and 23.72 % of Normal achievers have given out that they have least interest in Mathematics.

54.40 % of the Overs-, 32.39 % of Normals- and 28.96 % of Unders-, donot understand the teaching of Chemistry, well. Larger number of Normals-, 39.78 %, as compared to Overs-, (28.48 % and Unders-, 33.34 %) donot follow the teaching of physics properly. More Under-achievers have (49.91 % against 37.15 % Normals-, 25.22 % overs-), learning difficulties in the subject-area of Mathematics.

More of the over-achievers (37.82 % against 34.77 % Normals- and 27.69 % unders-) ^{need teacher's} individual help in Chemistry; the Normals-, (30.08 % against 28.78 % overs- and 27.90 % unders-,) need individual help of the teacher in Physics. In the subject area of Mathematics 55 % of Under-achievers, 35 % of the Overs- and 33.23 % of the Normal-, want the personal help of the subject teacher.

On the item, 'KEYA RAHUT DINON TAK ISKOOL SE ANUPASTHIT HONE PAR/ROZ KI PARDHAI ME ANEBAMIT HONE PAR/EYA, PPARAMENIK VISHWON KO PARDHE RAHUT DIN HO JANE KE KARAN-AAP KO APNE ANDER KAMI MEHSOOS HOTI RAHTI HAI ? The ratings have been obtained on a five point scale.

29.25 % of the Normals- 25.78 % of the overs- and 17.74 % of the Unders- have rated 'seldom' perhaps this signifies that these problems effect more the studies of under- achievers. The intensity decreases from Unders- to Normals- and Normals-, to Overs- More under-achievers experience the strain due to the conditions enumerated in the text of this item. 18.29 % of the Underachievers have rated on 'Always', Perhaps their studies were always effected by 'BAHUT DINON TAK ISKOOL SE ANOOPASTHIT HONE PAR' etc. More over-achievers (15.36 %) experience the strain due to the conditions in this item. They rated the item on 'Frequently'; 12.95 % of the Normals- rated it on 'Generally'.

On item 'KEYA SAIR-SAPATA/GAPP BAZI/AADHIK CINEMA DEKHNA/SAMAJIK JEEVAN SE ADHIK LAGGAV RAKHNA/ NETA GIRI /AESI PUSTAKEN PARDHANA JINKA PATHYA VISHESON SE KOI SAMBANDH NA HO-AAP KI PARDHAI KI SAPHALTA ME BADHA RAHUCHATE HAI ? More normals- (51.12 %) and less under-achievers (32.88 %) have rated on 'seldom'. More over-achievers (33.99 %) followed by under-achievers (32.57 %) have rated the item on 'some times'. 11.72 % of the under-achievers have 'frequently suffered' due to these conditions, whereas 10.71 % of the normals- felt that they generally experienced the strain due to the conditions in the item. 8.32 % of the Over-Achievers felt that their studies were 'Always' effected due to these factors.

The normals- and the over-achievers evince greater interest in the Indoor games (37.82 %) and (13.95 %) respectively) whereas greater number of under-achievers 95.83 % are more interested in Out-door games.

40.18 % of normals- 30.97 % of unders- and 29.36 % of over- achievers have given out reading as their hobbies. 67.47 % of normals- 57.78 % of the unders- like reading detectives. Lesser number of over-achievers read detective. Over-achievers are more interested in reading stories. Whereas, under-achievers prefer Novels. Many over-achievers have photography as their hobby where as normals- have sports as their hobby. About (6.06 %) have accepted being members of the political parties. None among the over-achievers or Normals-, have claimed themselves to be members of any political organisation.

Larger number of Over-achievers (80.44 %) take part in extra-curricular activities. More Normals seem to be doing NCC or participate in ^{social} services etc.

In the Maths. group 82.97 % of the Normals- and 65.76 % of the over-achievers have expressed their preference for academic courses. More Under-Achievers and the Normals- prefer going to Technical courses. Law and Army draws more aspirant to it from among the Under-achievers. Ever-Achievers seem to be liking Teachers-training more than the members of other two groups.

RESULTS OBTAINED FROM THE INTERVIEW SCHEDULES

The Over-, and Under-achievers and their teachers were interviewed to know about the causes of Over- and Under-achievement. Area-wise and question-wise frequencies were calculated separately. The results obtained are discussed below:

40 % of the under-achievers attributed their under-achievement to the Family's economic needs and 26 % to defective college education. 14 % gave out parental education and 10 % Maladjustment as reasons.

Pupil Area

Many did not have all the books they needed and a proper study room (60 %). Distance, illness or physical handicap, nervousness, anxiety and depression were checked hardly by a few subjects as reasons. About 40 % expressed that they are neither scolded nor praised for their good or bad academic achievement.

Economic-condition was perceived as a potent cause of their underachievement by as many as 40.7 % of the subjects. Cultural level was expressed not to affect achievement. 54.3 % of the parents of the underachievers placed importance on education, 31.1 % were neutral and 14.5 % did not attach any importance to it. About 34 % expressed that domestic work affected their achievement. Most of the subjects felt that their parents expected high-achievement from them, and 62 per cent wanted them

to join some profession. Business was also preferred as profession by 27 %. About 35 % were expected to share much, 55 % average and 10 % little of the domestic responsibility. About 57 % were expected to have little outdoor activities and almost equal number did not feel free to discuss their academic problems with their parents.

University/College

Several underachieving students (61 %) have considered teacher's competence as a factor in their under-achievement. 42 % students gave out that they were casually helped by teachers and about 31.7 % received teachers' help rarely, only 26.3 % received it frequently. Overcrowded classes, improvised laboratories were given as reasons by about 41.1 % (from associated colleges). College administration, ill organised courses were not perceived by under-achievers as causative factors.

The underachievers were perceived by their friends as brilliant 51.8 %, 32.7 % Average and 15.5 % dull. They were largely considered much social 49.7 %, 10.4 % unsocial and 39.9 % social. Their participation in co-curricular activities was judged to be Average (58.3 %), Little 12.8 % Much (28.9 %).

Over-Achievers:

The over-achievers placed more value on proper motivation and parental education for their better attainment (39.7 % and 38.3 % respectively). Family's better-economic status and good adjustment was not check-marked by many.

Pupil Area

The over-achievers 65 % had all the books and a good study room (100 % of the girls had this facility). 67 to 90 % of the ss said that long distance, illness, adjustment with friends, nervousness, excitement and depression did not have any effect on their achievement. 76 % expressed that they were praised or scolded for their good or bad achievements.

Family Area:

The probability of socio-economic status and cultural level of the family affecting achievement was equally distributed. Parents of the over achievers viewed education as important 79.2 %. The rest expressed it as neutral and none as unimportant. 58 % expressed that they did not have much involvement in domestic work. Over-achievers parents were viewed by them to expect High achievement (64 %), 29 % average and 7 % Low.

Many students felt that their parents wanted them to become either doctor (34 %) or Engineer (29 %) and rest other professions or jobs. They were expected to participate in very few outdoor activities (Little 71 %).

University/College.

40 % expressed that their achievement had been affected by teachers competence. About 50 to 69 % said that college administration, ill organised courses and lab. conditions did not influence their achievement. 71 % of the subjects received frequent help from their teachers (69 % from associated colleges and 80 % girls). Extra curricular activities hindered the studies of about 15 % only. 52 % of their friends considered them average in their studies. They were not considered to have much social life. Much social 28 %, social 38 %, 34 % unsocial. Their friends expected their participation Much (22 %), Average (41 %), and little (37 %).

In addition to over-, and under-achievers, teachers were also requested to express their opinion about the causes of Under-, and Over-achievement.

40 % teachers said that students' achievement was commensurate with their mental ability. The rest disagreed with it. About 60 % of the teachers thought that about 25 % of the students achieved ~~it~~ less and about 10 % more than their expectations. High percentage of teachers attributed Incidental or chance factors as potential reason in under-, and over-achievement (57 %). In order of descending frequencies, University/College Education, Pupil himself, Parents and community were ranked as causative factors in differential achievement.

Pupil Area

It was given out by teachers that headache and only prolonged illness could affect achievement (29 %). Rest did not consider it important.

Academic backwardness. In the mathematics group teachers' opinion was ranked in order of descending frequencies. Physics claimed highest number of academic backwards followed by Mathematics. For Biology group Chemistry was deemed to be the toughest subject by their teachers (41.3 %). Indulgence in Non-academic activities, impersonal teaching, weak back ground, language difficulty and non seriousness of students were given as reasons for under-achievement in order of descending frequencies.

About 35 % of the teachers thought that students offered subjects only for their job value and did not actually possess a genuine interest in them.

Social Problem

About fifty three per cent ~~td~~ did not consider social adjustment as a factor causing discrepant achievement. In their opinion maladjustment could be largely individual. Others thought that financial condition and adjustment with teachers contributes to the phenomenon.

Emotional Problem

21 % of the teachers gave out Complexes and Estimation (wrong assessment of abilities) to be the possible cause of underachievement. Other causes given out by them had very low frequencies and, therefore, have not been considered important

Family

It was revealed, from the frequencies that teachers considered approximately 25 % to 30 % of the students to be underachieving due to poverty, nearly 5 to 8 % due to parental indifference 2 to 4 % due to parental illness and 3 to 10 % due to parental education.

Community:

Regarding the responsibility of the community, occupational patterns, ~~and~~ caste-structure, educational level and social prestige- the teachers were much divided. Largest agreement of 21.7 % was that the impact of one or more of these factors could be ~~only~~ more explicitly seen on those under-achievers who belonged to one or more of these categories and their effect could not be generalised over

University/College:

47.8 % expressed that the curriculum was overloaded. And many boys did not get the subjects they wanted to read.

The consensus of about 50 % was that extra-curricular activities could be a factor in underachievement if they took more than usual time.

31 % of the teachers considered that indifference, negligence, inefficiency and their un-teacher like conduct could be responsible for underachievement. Large number of them ~~have~~ hoped that personal interest of teachers could improve the situation to some extent.

Suggestions offered by them put in order of descending frequencies have been put below;

1. Improvement in evaluation pattern and reduction in change factor in examinations.

2. Gap between the Intermediate and B.Sc. is so wide that curricular adjustment in the changed set up becomes often difficult. Efforts should be made to reduce this gap as far as possible.

3. Regular machinery for identifying underachievers and for discovering causes of their under-achievement. (Individually as well as in group).

4. Better teacher-taught ratio and small classes.

5. Seminar classes (In one of the Universities teachers came forward with figure to establish that failures in physics were less in number when they had provisions for seminar).

The results presented also examine the hypotheses built up in Chapter I. It may be observed that hypotheses Nos. 1, 2, 3 and 5 are retained. No 4 is partially retained as the findings differ from group to group. Hypothesis No 6 is rejected.

DISCUSSION

CHAPTER V

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CHAPTER VSUMMARY OF THE RESULTS AND DISCUSSIONMATHEMATICS CURRICULUM: UNIVERSITIES (A,B & C)-
UNDERACHIEVERS

Under-Achievers showed more concern in the areas of Finances, Living conditions, and Employment (FLE) than did the Overs- and the Normals-.,.

The under-achievers have revealed that they have more problems in the Areas of Adjustment to college (school) work (ACW) (ASW); the Future; Vocational and Educational (FVE) and Curriculum and Teaching Procedure (CTP), as Compared to over-achievers.

The under-achievers have, also, higher mean on Finances, Living Conditions, and Employment (FLE); Social and Recreational Activities (SRA); Personal-Psychological Relations (PPR); Courtship, Sex, and Marriage (OSM); Adjustment to College work (ACW); The Future; Vocational and Educational (FVE) and on the total MPCL.

On the "Census count" of discrepant achievers' problems it appears that under-achievers' "Problem-levels" are high. As the items marked are to be treated as symbols of the experiences and situations which signify individual's problem-world, just likely that the orientation of the Under-Achievers in terms of their unique experiences may be making them much more constricted and unable to "carry through" their academic work well, when faced with problems particularly in the area of (ACW) and CTP).

Of the twenty five most frequently marked problems the Under-achievers have pointed to the following specific problems on which the differences between the percentages (Unders- & overs-,) are significant; under-, having higher percentages.

In the Adjustment to College work Area specific problems that have concerned the Under-Achievers are:

1. 'PRABHAVKARI DHANG SE ADHEY^AN KARNE KI VIDHI NA JANNA'
2. SAMAY PAR ADHEYAN PURA NA KAR PANA'
3. 'ADHYAN ME ADHIK SAMAI NA DE PANA'
4. APNE KARIYA SE AASANI SE DHEYAN HAT JANA'

Other specific problems that the Under-achievers have been aware of and willing to reveal are; 'AATMA VISHWAS KI KAMI HONA' and PRAEYATNA KARNE PAR BHI BAHUT SE KAMON ME SAPHAL NA HO PANA', both items are from the PFR area. Perhaps 'AATMA VISHWAS KI KAMI HONA' makes the under-achievers approach academic problems fearfully as they doubt their ability to overcome them.

The Under-Achievers selected the problem 'ADHIK LOK PRIYA HONE KI CHAH HONA' in SFR area and 'AWASHYAK PUSTAKON KO PRAPT KARNE ME KATHINAI HONA' in OTP area. These problems may possibly be causing some sort of blockage in the proper functioning of under-achievers' personality so that they are barred from reaping the full promise of their potentialities. Their desire to be more popular may be diverting their energies in some spheres other than 'Academic' wherein they are more sure of gaining popularity.

Self-concept, study-hours, Attitudes towards School, Peers, Teachers and Studies donot seem to be contributing to under-achievement.

Underachievers have higher intelligence but poor study-habits. Intelligence is only one of the cognitive determinants of academic success. Study-habits and attitudes are important motivational components of the same end product i.e. academic success. Bad study-habits may be the reason for intelligence not helping the achievement in this group.

In the sphere of college/University ki shiksha, In Chemistry almost an equal number from amongst the Unders- and overs-, have expressed their least interest in the subject. A large number of under-achievers (Table IV. 27) seem to have little interest in Mathematics and Physics. The teaching too, in these subjects is not understood by many of the members of this group. About 55 % of them need individual help of the teachers in Mathematics. Physics too, makes about 27.90 % desirous of ~~Mathematics~~ teachers' personal help. This may possibly be reflecting weak spots in the teaching of the subjects with its impact on students' achievement. Those whose learning difficulty in the subject area persisted could not perhaps do well.

Long absence, Ir^eregular studies, Habit of not revising the elementary or previous lessons, Gossiping, Cinema going, Irrelevant readings, effect underachievers as much as any other group of achievers. In individual cases their strain might vary in direction and proportion to the capacity of the individual to react to it.

Underachievers are less interested in Indoor games and are much interested in outdoor games. A considerable number of under-achievers gave out studying, ~~in~~ photography, and stamp collection as their hobbies, (Table IV. 26). Quite a few only from the under-achievers admitted being members of the political parties and gave out politics as their hobby. Their readings are more confined to Stories, Novels and Detectives. They preferred going in for Law and other professional courses. Army, too, attracted a few of them.

BIOLOGY CURRICULUM: (UNIVERSITIES - A, B & C).

UNDER-ACHIEVERS

In the Biology curriculum the three achieving groups viz, Under-, Over- and Normal do not differ significantly on any of the eleven MPOL areas and its total. Under-achievers have higher Mean on Finances, Living conditions, and Employment (FLE); Social-Psychological Relations (SPR); the Future: Vocational and Educational (FVE) and the total MPOL. Higher Mean on the total MPOL and in the MPOL areas FLE, SPR, and FVE is perhaps suggestive of Under-achievers having numerically more problems as a whole and in these specific areas. Just likely that under-achievers concern about Finances, Living Conditions and Employment, The Future: Vocational and Educational and Social-Psychological Relations make them anxiety ridden to affect their academic performances adversely.

Study-hours, study-habits and Self-concept do not apparently seem to be contributing to the underachievement of the group.

The Biology under-achievers do not differ from the Over-achievers in their attitudes towards studies, Teachers, Peers and School but as compared to Normals-- they possess more positive attitude in these areas. Perhaps their intelligence along with their individual capacities and orientation to react to the conditions available for studies in the college and to the behaviour of the teachers and the friends, make their attitudes more constructive.

The Biology Under-Achievers have most frequently checked following problems on the MPCL. The differences of percentages on the items, in comparison to over-achievers, are significant:

1. APNI MANSIK UNATI KI ICHHA KARNA (SRA) (Nothing surprising if an intelligent lot aspires for mental growth or improvement).

2. APNE VICHARON KO SHABDON ME THEEK SE VYAKTA NA KAR PANA (ACW)

3. AWASHYAK PUSTAKON KO PRAPT KARNE ME KATHINAI HONA (GTF).

4. 'AATMA VISHWAS KI KAMI HONA'. (PPR)

5. 'SAMAI PAR ADHEYAN PURA NA KAR PANA'. (ACW)

6. 'ADHEYAN ME ADHIK SAMAI NA DE PAANA'. (ACW)

7. 'PATHEYA PUSTAKON KO SAMAJHNE ME KATHINAI HONA'. (GTF)

The essay type examination as it is in vogue in universities puts a high premium on students' self-confidence. To do well at it one needs to have

reference and other books available at hand.

Organisation of ideas and ability to translate them in proper language, to be regular and to devote more time with proper understanding of text books are

pre-conditions rather sine-qua-non of good performance at an examination, despite all that for which the prevalent examination system is criticised for and considered baneful. And if the under-achievers lack these requisites of high achievement their place is probably justified and may be a contributory effect of these shortcomings. One wonders if medium of instruction in University/College and non-availability of standard text books in regional languages is partly to be blamed for students' problem of not completing their studies on time. It may also be due to their faulty budgeting of time among different activities and studies or among different subjects. Sharp break that occurs in the medium of instruction between the secondary and the collegiate/university education may also be one of the reasons for their inability to understand the standard text books.

In the area, COLLEGE UNIVERSITY KI SHIKSHA 48.34 % of the under-achievers have given out that they are least interested in Botany and 35.02 % have been less interested in Chemistry. The reason is perhaps obvious as about 48.00 % did not follow the teaching in the subject area of Chemistry. Their lack of interest in Botany may be due to motivational, attitudinal or some other factors. But the need of 31.13 % of under-achievers for personal help in Botany and that of 25.94 % in Chemistry may be suggestive of their learning difficulties in these two subjects. The studies of quite a few under-achievers have been affected 'sometimes' (38.94 %);

'Frequently' (18.28 %) and 'Generally' (10.84 %) due to 'Bahut dinon tak Iskool se aneopasthit hona/ Roz ki pardhai me anesamit hona/ Rya, Prarambhik visheon ko pardhe bahut din ho jane ke karan/ Sair-sapatta/ Gappbazi/ Adhik cinema dekhna/ Netagiri/ Reading books not connected with course, 'frequently' and 'generally' affects studies in case of about 13.67 % and 11.08 % of underachievers. These conditions may perhaps be contributing to their default in attainment.

Underachievers are given more to Outdoor games. It is possible that the Outdoor games consume more of their time and return them adequate recognition in the field, creating imbalance in the academic spheres.

Many underachievers have given out 'studying' as their hobby. It could be of advantage to them if their reading interests were not high on 'detectives', 'stories' and 'novels'. Unless their minds were mature enough more often than not, cheap detectives retard the healthy growth of personalities. Just possible that the choice of the Under-achievers for the detectives etc., deprive them of the company of great thoughts, the inspiration of great ideals, the examples of great achievement and the consolation of great failures.

Only among the underachievers there is an indication that about 8.33 % had politics as their hobby. Perhaps an explanation for this tendency from the teaching learning situation itself may not be out of place. In a stuffy classroom of 30 to 150 pupils an average student is lost in a vast anonymity. His desire for recognition remains unsatisfied and

he prefers to get satisfaction by exploiting his nuisance value with a politician's mask on himself. Larger number of underachievers are members of NCC., and other Social service organisations. Perhaps the same explanation of 'ego-satisfaction' applies here too. They do better in these spheres and get easy obedience and following, possibly at the cost of their studies.

More of the underachievers prefer to go for academic courses. Very few prefer teaching. Many desire joining professional courses. The preference for academic courses on the part of the under-achievers may be due to their awareness of their limited financial resources or lack of adequate information and prospects of professional courses. The under-achievers are intelligent lot. There is nothing to bar their ambitions. They, perhaps, only need to be aware of the factors that cause regression in their achievement.

UNDER ACHIEVERS: ASSOCIATED COLLEGES (D)

Mathematics Curriculum

Of the twenty five most frequently checked problems the underachievers in the associated colleges selected the following problems on which they had higher frequencies and differed significantly from the over-achievers:

1. 'SIDHANTON AUR SOOCHAM VICHARON KO JALDI NA SAMAJH SAKNA'
2. 'APNE VICHARON KO SHABDON ME THEEK SE VIKATA NA KAR SAKNA'

Learning in physics and mathematics both, involves derivation of formulae and understanding of underlying principles that demand application in

solving and answering questions. Similarly, organising and marshalling of thoughts and later giving them proper wordings is very much essential for making a good and comprehensible answer. Failure in both the aspects may perhaps help bad achievement only.

ASSOCIATED COLLEGES: BIOLOGY CURRICULUM.

Underachievers from the Associated colleges selected more problems from the areas of curriculum and Teaching Procedure (OTP) and Adjustment to college work (ACW) out of the twenty five most frequently checked problems six alone are from OTP and five from ACW areas. Under-achievers have higher frequencies and differ significantly from the over-achievers on the following items:

1. 'PRABHAVKARI DHANG SE ADHEYAN KI VIDHI NA JANNA'
2. 'MATA PITA KA MUJHSE BAHUT ADHIK AASHA RAKHNA'
3. 'AWASHYAK PUSTAKON KO PRAPT KARNE ME KATHINAI HONA'
4. 'VEEPREET LING WALON SE KAHAN TAK SAMBANDH RAKHA JAEY EH NISCHAY NA KAR PANA'

Students in the associated colleges are mostly those who have failed to qualify themselves for admission in the Universities. Many of them are not deficient in their mental abilities. Then, what accounts for their under-achievement is perhaps their ill organised studies. They do not, as they admit, know the effective way of studying. It is

to be admitted that performance at an examination depends much on what and how an examinee reads. Much of the undesirable students' failures can perhaps be checked if proper guidance and counselling is made available in time.

The problem 'Parents expecting too much of me' needs a little explanation which might help appreciation of the problem. With the explosion in the number of school going population, the University/College^s are faced with unprecedented ~~xxxxx~~ rush for admission. All class and caste of 'first generation learners' are swarming our colleges and Universities. Many poor parents stake their marginal resources in sending their children to take higher-education with 'great expectations'. The students naturally feel that their parents are expecting too much of them. And when the returns on the investment of their parents donot seem to be reassuring anxiety and tension largely denude their productive energies.

The problem of 'difficulty in getting books' may largely be due to stringent financial condition of the subjects or poor library of the colleges which fail to cater the needs of the students. Perhaps, this gap can be bridged over with effort, resources and will on the part of those who administer the colleges.

In colleges/University, particularly in Biology group, more girls seek admission. There is co-education. There is quite a lot of mixing that is made a little bit essential by the practicals in the subjects of Biology, Botany and Chemistry. Students coming from intermediate colleges and from

such homes where these conditions were not available are lost. They fail to make decision how far to go in their relations with their classmates belonging to opposite sex. Nothing surprising if the concern for opposite sex looms large on their minds and saps their energies and consumes their time which could otherwise have been utilised in fruitful studies.

UNDER-ACHIEVERS: MATHS. & BIOLOGY (A,B & C) - A COMPARISON.

Under-achievers from the Maths. curriculum have more problems in the area of Finances, Living conditions, and Employment (FLE); Courtship, Sex, and Marriage (CSM); Adjustment to college work (ACW); Curriculum and Teaching Procedure (CTP) and the total MPGL. The Biology under-achievers express more problems in the area of social-Psychological Relations (SPR). The differences on these areas are significant. Numerically possibly, the Biology under-achievers have more problems in HPD (Health and Physical Development) area. The Maths. under-achievers have higher 'census count' in the areas of Social Recreational Activities (SRA), Personal-Psychological Relations (PPR), Home and Family (HF), Morals and Relation (MR) and The Future: Vocational and Educational (FVE).

It is likely that different curriculums, their requirements and the environment created within the curriculums exercise varying press upon individuals and body of students. Their capacities to react might also be different in proportion to the defence mechanism inherent in them and acquired by them from

the class room situations and different family backgrounds.

The Maths. group is higher in Attainment. With respect to Study-habits, Study-hours, Attitudes and the Self-concept the under-achievers from the two curriculum are alike.

UNDER-ACHIEVERS: ASSOCIATED COLLEGES Vs. UNIVERSITY (C).

MATHS. CURRICULUM

In Maths curriculum, Under-achievers from Associated college, have more problems in the areas of Health and Physical Development (HPD); Finances, Living conditions; and Employment (PLE); Social-Psychological Relations (SPR); Personal-Psychological Relations (PPR); Home and Family (HF); Morals and Religion (MR); The Future: Vocational and Educational (FVE); Curriculum and Teaching Procedure (CTP) and the total MPOL. Perhaps, the underachievers from the Associated Colleges have more problems as compared to the under-achievers from the University used for comparison. The reason may be that the psychological pressures in the two categories of institutions may be different and may be having different impacts. Besides, just likely that the underachievers in the Associated Colleges have weaker financial background than the underachievers from the University. Home and Social background may also be different. Many of these come from rural settings and are faced with value-conflicts. Perhaps this group (under-achievers from the Associated Colleges) of under-achievers has a lower achievement ethics and is also less knowledgeable. Goal orientation might be lacking in them as it is one of the problems in the areas The Future: Vocational and Educational.

Their higher intelligence probably assists them recognising their problems and express psychological relief with the feeling that they have obtained better understanding of their problems. With respect to Study-Habits, Study-Hours, Attitudes and Self-concept, the underachievers from two sources are found to be alike.

BIOLOGY UNDER-ACHIEVERS O Vs D

Under-Achievers from the Associated Colleges in Biology Curriculum also, have more problems as compared to the under-achievers from the University 'C'. The under-achievers from the associated colleges have higher Mean on all the eleven MPOL areas and its total. The groups of discrepant achievers from two sources differ significantly on HPD, FLE, SRA, AOW, FVE, CTP, sub-areas and the total MPOL. With respects to Study-Habits, Study-Hours, Attitudes and Self-concept ~~and~~ the groups are alike.

INTERVIEW OF THE UNDER-ACHIEVERS YIELDED THE FOLLOWING RESULTS:

The under-achievers assigned their under-achievement to 'Family's Economic Needs', 'Defective College Education' including teaching, over-crowding in classes and improvised laboratory conditions etc., 'Not having books and proper place for studying'. Many of the under-achievers said that they were neither praised nor scolded for their good or bad ~~academic~~ academic work. Perhaps want of intrinsic motivation stood in the way of their better learning. Some of them may also have experienced constraints imposed upon them by their cultural backgrounds and parents ~~goal directness~~ who wanted them more to join

family profession or business than excel at the education they were in. They also did not feel free to discuss their problems with their parents. Friends of the Under-achievers viewed them to be quite social.

RESULTS FROM THE TEACHERS' INTERVIEW

Many teachers thought differential achievement to be the function of 'incidental or chance factors' in examinations. In Maths. group Physics and Mathematics were thought of as subjects having largest number of backwards. Possibly the subjects, require understanding of the principles and formulae, drilling, application and regular work which, perhaps the underachievers did not seem to be capable of. In Biology group teachers thought chemistry to be difficult for students. May be that the subject involves setting up of complicated equations in organic and inorganic areas and requires firm background which the under-achievers might be lacking. Weak background, non-academic activities, financial difficulties and lack of genuine interest in the subjects were also given out by teachers as possible reasons for under-achievement.

OVER-ACHIEVERS (A, B & C): MATHEMATICS CURRICULUM

Over-Achievers from A.B & C, the three universities under-study (MATHS.) have fewer problems in the areas of Finance, Living conditions and Employment (FLE); and Adjustment to college work (ACW). The Future: Vocational and Educational (FVE), and Curriculum & Teaching Procedure (CTP), as compared to under-achievers.

In the area of Personal Psychological Relations (PPR) the over-achievers revealed more concern as compared to Normals-.

Specific problems that concerned the over-achievers were in comparison to under-achievers are;

1. SHARIRIK DRISTI SE BAHUT AKARSHAK NA HONA (HPD)
2. LOGON SE PARICHAY BARDHANE ME SUST HONA (SRA)
3. SABHI BATON KO BAHUT GAMBHIRTA PURVAK SOCHANA
AUR KARNA (PPR)
4. ADHEAPKON KA VIDYARTHION KI BHAVNA KA KHEYAL
NA KARNA (CTP).

" A problem is 'bad' or 'good' or 'neutral' in an individual case depends on whether it signifies a point in progression toward growth or signifies a point ~~xxxxxxxxxxxx~~ of imbalance toward excessive frustration".¹ Possibly, being not very attractive physically, being slow in getting acquainted with people, help them in positive direction to seek compensation in academic fields. Grades they earn serve them for extrinsic motivation. Taking things seriously may be building up a great readiness in the direction of academic achievement also. The problem of teachers not being considerate to students feelings, probably, makes the subjects of this group more self-reliant. They may not be looking for a 'crutch' from their teachers to hang upon. They, perhaps, solve their difficulties with

1. H.L.Mooney & L.V.Gordon, : The Mooney Problem Check List-Manual, The Psychological Corporation, New York

self effort which might be forming a better and permanent learning.

Over-achievers have higher intelligence and lower attainment. They have better study-habits and attitudes. It is likely that the over-achievers have 'study-methods', 'motivation for study' and 'attitudes towards scholastic activities important in the class room', better than the under-achievers and the normals-. The results obtained support the findings of Altus, (1947)¹ Bond (1952)² Brooks and Heston (1945),³ Duncan et. al. (1951),⁴ Januar (1958)⁵, (1961),⁶ Michael and Reeder (1952)⁷, Myers (1950)⁸, Wrenn & Humber (1941)⁹ who have found the importance of study-habits

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1. W.D.Altus : Non-intellective factors and grades: Study Habits and Adjustment Tests. Proceedings of the Western Psychological Association, Amer. Psychologist, 10, 415 (1947).
 2. J.A.Bond : Analysis of Factors Adversely affecting Scholarship of high school pupils. Journal of Educ. Res., 46, 1-15 (1952).
 3. F.D.Brooks & J.C.Heston : The validity of items in a Study-Habits inventory. Journal of Educ. Psychology, 36, 257-270, (1945).
 4. G.P.Duncan et. al. : How the poorer student studies: A research report. Journ. of Educ. Research, 45, 287-292 (1951).
 5. K.K.Januar : Study Habits and achievement. Psychological studies, Mysore, 3, 37-42, (1958).
 6. _____ : Investigation of some psychological factors underlying the study-habits of college students. Doctoral Thesis, Patna University (1951).
 7. W.B.Michael & D.E.Reeder : The development and validation of a primary form of Study-Habits' Inventory. Calif. Jour. Educ., 6, 177-183, (1952).
 8. R.C.Myers : The academic over-achievers: Stereotyped aspects. J.exp. Educ., 22, 228-238, (1958).
 9. G.G.Wrenn & W.J.Humber : Study habits associated with high and low scholarship. Jour. Educ. Psychol., 32, 611-616 (1941).

in academic achievement.

Study-Hours, Attitudes and Self-Concept donot seem to help the achievement of over-achievers.

From the Personal Data Schedule it may be inferred that about 51.09 % of over-achievers (Maths) feel less interested in Chemistry. About 54.40 % donot understand the teaching in the subject and about 37.82 % need personal help of the teacher. Quite a few of the over-achievers (Table IV. 2%) feel that their studies sometimes suffer due to long absence, Irregularity, Gapbani, too much cinema going or due to having too much of social life. etc.

As compared to Normals more over-achievers seem interested in outdoor games. Their reading interest is mostly 'stories'. About 80.44 % of them take part in extra curricular activities. 65.76 % of over-achievers prefer academic courses. Almost equal number wants to go fer teaching or technical courses. May be that by pursuing academic courses they look for other managerial or administrative jobs in future. Poor prospects in technical and teaching career make ^{them} treat these careers as equally good or bad.

OVERACHIEVERS (A, B & C) BIOLOGY CURRICULUM.

The three achieving groups namely under-, Over- and Normal donot differ significantly on any of the eleven MPOL^{areas} or its total score among themselves. Over-Achievers have higher Mean in the areas Social and Recreational Activities (SRA); Home and Family (HF); Adjustment to College work; (ACW) and Curriculum and Teaching Procedure (STP). Perhaps numerically they have more problems in these areas, the awareness of their problems is perhaps conducive to them.

Specific problems on which they differ significantly from the under-achievers are;

1. MATA PITA KA MERE LIYE BAHUT TYAG KARNA
2. KAKCHAEN BAHUT BARDI HONA (CTP)
3. ADHEAPKON KA VIDYARTHION KI BHAVNAON KA KHEYAL NA KARNA (CTP).

'Parents sacrificing too much for me' is checked by 54.05 % of over-achievers. Perhaps this group of students is quite conscious of the facts that their parents can ill afford the cost of their higher education. This awareness is more because unlike the students in many foreign countries they have to depend entirely on their parents as there is no provision for 'earning and learning' both. Perhaps this awareness makes them anxious and try to get proper returns on their parents investment. They know that their poor achievement would dupe their hopes and belie their expectations. Consciously or unconsciously they may be developing in them an 'achievement ethics'. Over-achievers are high on 'Attainment' and put in more hours of study. In study-hours they differ significantly from the Normals. Study-Habits, Attitudes and self-concept do not seem to help over-achievers in their achievement. Role of study-habits in this group supports the findings of Ahmann & Glick (1957)¹ Ahmannⁿ, Smith and Glick (1958)², Anderson and Kuntz (1959)³.

1. J.B. Ahmann & M.D. Glick : The utility of study habits and attitudes inventory in a college reading programme. Jour. of Educ. Res. 51, 229-303. (1957).
2. J.B. Ahmann, W.L. Smith & M.D. Glick : Predicting academic success in college by means of study-habits and attitude inventory. Educ. Psychol. Monst. 18, 353-357. (1958).
3. R.P. Anderson & J.E. Kuntz : The survey of study habits and attitudes in a college counselling center. Personnel Guid. J. 37, 365-368 (1959).

From Personal Data Schedule;

About 39.68 % of the Bio-over-Achievers are least interested in Chemistry, about 73.07 % donot understand the teaching in the subjects and 19.44 % need individual help of the teachers. Zoology, too, claims 27.77 % who require teachers help. Perhaps both the subjects have practicals as very important part. Demonstration, explanation, cutting the sections, spotting, and dissection make students need teachers' help more in these subjects.

The ~~minimum~~ studies of about (35. % to 50 %) over-achievers are affected due to long absence, Irregularity, Gappabasi, Cinema going and too much social life.

As compared to unders- they seem to be less interested in outdoor games and more in indoor games. Largest number of over-achievers have given out photography as their hobby. Their reading interest is more in the area of story reading. As compared to Unders-and Normals-, it appears that perhaps they participate less in extra curricular, NCC or social service activities.

More over-achievers prefer teaching -may be that they are not well informed about the prospects in other professions. They may also have been restricted due to other reasons in family or financial problems which might be restricting their choice for a long drawn several years' course as Medical.

OVER-ACHIEVERS: BIOLOGY & MATHEMATICS (A,B & C)*

A COMPARISON

Over-achievers of Biology and Mathematics curriculum differ significantly on Adjustment to college

work (ACW) area of the MPCL. Possibly the Biology over-achievers have more problems with respect to college work. Numerically the Maths. group ~~is~~ of over-achievers seem to have more problems in the HPD, FLE, SPR, GSM, HF, MR, FVE, GTF - areas and the total MPCL. The Biology overs- have higher Mean on SRA, PFR and ACW areas. But no group difference can be pointed to.

Specific problem that has been checked most frequently by the over-achievers of the Biology and Mathematics group, both, and which differentiate them significantly from the Under-achievers is in the GTF area, 'Adheaphon Ka Vidharthion ki Bhavna ka kheyal Na Karna'. The problem may be reflective of the teaching learning condition in the University/College and students' perception of their teachers.

Maths over-achievers have higher intelligence and higher attainment. With respect to study-habits, study-hours, Attitudes and self-concept, the groups seem alike.

OVER-ACHIEVERS: ASSOCIATED COLLEGES (D) Vs. UNIVERSITY (C).

MATHS. CURRICULUM:

The over-achievers from the Associated Colleges are more concerned about their 'Health and Physical Development'. On this area (HPD) they differ significantly from the ~~them~~ over-achievers from the University C. On the rest ten MPCL sub-score areas and its total the Bio-and the Maths. Over-achievers seem to present no difference. The Associated colleges group express ~~numerically more~~ problems in the areas of HPD, FLE, SPR, GSM, HF, MR, FVE, GTF and the total MPCL. The University group has higher

Mean on SRA, CSM, and MR.

Specific problems that rank high and are checked frequently by the over-achievers of the Associated colleges are: 'Dhan Ke Sambandh Me Parivar ka chintit Hona', 'Sabhi Baton ko Gambhirta Purvak sochna va karna' and 'Apni Pasand ki ohijon ko Pardhne ka bahut kam Avsar Hona' - Perhaps, 'family's worry about finances' and 'taking things too seriously make these over-achievers apply themselves better to their studies. And possibly, limitation on them in reading whatever they liked left them with no other choice except to read the text books.

The over-achieving subjects from the University have higher intelligence and higher attainment. They donot differ materially from their counterpart in the Associated colleges so far as their study-hours, Attitudes and self-concept are concerned.

The over-achievers from the Associated colleges have better study-habits and attitudes. Possibly students in the Associated colleges are told repeatedly what and how to read. They may have also been told to form correct habits in note-taking and answering test papers etc.

OVER-ACHIEVERS: BIOLOGY-CURRICULUM (C vs. D)

Over-achievers from the University (C) in the Bio-curriculum seem more concerned with problems in the area of social and Recreational Activities (SRA). Nothing surprising if the over-achieving subjects in the University, in their anxiety to do well at examinations refuse themselves many recreations. They, perhaps, rationalise their act of suppression and feel satisfied with their gains in achievement. But, it is likely that they actually feel quite a

let about everything they miss, hence their problems in this area. The group from the University and the associated colleges do not differ significantly on other sub-score areas of the MPOL.

The specific problem on which Bio-group over-achievers of the associated colleges rank high and check frequently is: 'Kam wajan Ka Hona' in HPD area. This problem is marked by 70.99 % of over-achievers and the difference with Unders- is significant. Out of the twentyfive most frequently checked problems, the Bio over-achievers have selected seven problems alone from the CTP area.

Over-Achievers (Bio), from the Associated colleges have higher attainment and better study-habits as compared to over-achievers (BIO) from the University. They donot appear to present any difference so far as their Intelligence, study-hours, Attitude and Self-Concept are concerned.

INTERVIEW SCHEDULE:

From the 'Interview schedule' data it seems to be revealed that the over-achievers attached importance to proper motivation and parental education. They had the necessary books and reading conditions. They got immediate reward or punishment for their good or poor achievement (Praise..... Scolding). Their parents viewed education as important and wanted them to study with a specific profession in view. They did less of domestic work and participated in fewer out door activities. They were considered

less social by their friends. Teachers' competence was thought of by them to influence their achievement. More over-achievers got frequent help from their teachers (Many of the girls 80 %, and students from Associated colleges 60 %).

NORMAL-ACHIEVERS: MATHS. CURRICULUM

In comparison to over-achievers the Normal-Achievers have more problem in the Adjustment to college work (ACW) area. Normal Achievers have higher mean on Home and Family (HF) and Curriculum and Teaching Procedure (CTP). But the group differences are not noticed.

Normals-, have higher intelligence as compared to Overs- and higher attainment as compared to Unders-. This hardly needs any explanation as Normals-, constitute of those who have 'High Intelligence' and 'High Achievement' or 'Low Intelligence' and 'Low -Achievement'. Possibly this batch has more of those who are High on Intelligence and Attainment, both.

Normals- put in more hours of study as compared to unders- and overs-. They have better study-habits in comparison to unders-. They have better attitudes towards studies, peers school and teachers in comparison to overs-. Self concept makes no group ~~diff~~ difference.

From the analysis of the Personal Data Schedule it is revealed that many of the Normal-Achievers (59.25 %) are less interested in Chemistry. 32.39 % of the Normals do not understand the teaching in

the subject and about 34.77 % require personal help of the teachers. In Physics about 39.78 % do not understand the teaching and about 30.08 % need individual help from the teachers. This may be suggestive of some thing wrong either with the curriculums of teaching methodologies in the subjects or ~~teaching methodologies~~ teaching personnel engaged in the work. Long absence, irregularity etc. affects their studies a little more than it does in the case of unders-. Gappabasi, cinema-going, having too much of social life affects the studies of about 51.12 % seldom. Perhaps, this group may not be given more to gappabasi, cinema-going etc. Normals-, are more interested in indoor games. Largely (40.18 %) of the Normals have given out studying as their hobby- and about 67.47 % like recarding of detectives. They participate more in KCG and other social-service activities. A good number (82.97 %) wants to go in far academic courses. Only 4.54 % prefer teachers' training and 18.81 % technical courses. Financial status of the parents, their ability to afford four or five years of technical education, slump in engineering graduates' market, poor prospect for teachers or their ambition to compete for administrative services or joining managerial or executive posts in industrial concerns may be some of the plausible reasons.

NORMALS: BIOLOGY CURRICULUM

Normals- in the Biology curriculum do not seem to differ on any of the eleven sub-score areas of the MPCL or its total from the unders- or the overs-. They have higher Mean on GRA and MR. They have higher intelligence as compared to overs- and higher attainment as compared to Normals-. They put in lesser hour of work as compared to overs- and have less positive attitude towards school, teacher, studies and peers as compared to unders-.

From the personal data schedule it may be gathered that Normals 46.57 % are least interested in Chemistry. About 64.01 % do not understand the teaching in the subject and quite a good number 35.35 % need individual help of the teachers. This might need a fresh orientation in the method of teaching the subject and also a probe into the content of the curriculum. Among the Normals 30 % to 40 % experience that their studies suffer seldom and sometimes due to long absence, irregularity, sairasappata, Gappbasi, Cinema going, too much of social life, leadership etc. Normals-, are more interested in indoor games in comparison to unders-.

More normals-have given out their hobbies as studying 25.71 % and sports 15.37 %. Large number of them 55.45% prefer reading stories. Their participation in extra curricular activities is more than unders- & overs-. They take more part in NCC, social-service etc, as compared to overs-. About 49.05 % have their goal set for professional courses. About 36.63 % want to go in for academic courses.

CONCLUSION AND SUGGESTION

CHAPTER VI

CONCLUSIONS

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SUGGESTIONS

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CONCLUSION AND SUGGESTIONS

I. CONCLUSIONS: Analysis of the data revealed the following characteristics of the Under-, Over- and Normal-Achievers in the Science Curriculum (BIOLOGY AND MATHEMATICS):

A. UNDER-ACHIEVERS:

The Under-Achievers have higher "problem-levels".

The Under-achievers from different curriculums and those from associated colleges and the University are not alike.

1. MATHS CURRICULUM

Under-achievers (Maths. curriculum universities) show more concern in the area of Finances, Living conditions, and Employment (ELE) than did the over- or the Normals-.

Under-achievers (Maths University) have more problems in the area of Adjustment to College Work (ACW); The Future: Vocational and Educational (FVE) and Curriculum and Teaching Procedure (CTP), as compared to Over-Achievers.

Under-Achievers selected with great^{er} frequency problems that fell into categories of ACW. Most prevalent problems on which the Under-achievers rank high and differ significantly from the Over-Achievers are:

In the ACW area:

'Prabhavkari Phang se Adheyen Karne ki Eidi Na Janna'; 'Samaye Par Adheyen Pura Na Kar Pana'; 'Adhyan Me Adhik Samaye Na De Pana; Apne Kariya Se Aasani se Dheyen Hat Jana.

In FVE area:

'Khatra Vishwas ki Kami hona' (checked by 48.63 %)

and 'Prasanna Karne Par Bhi Bahut se kamon me
Saphal Na ho pana'.

In SPR Area;

'Adhik Lok Priya hone ki Chah Hona'

In C.T.P. Area;

'Awashyak Pustakon ko prapt karne Me Kathinai
hona'.

Under-achievers have higher intelligence but poor-
study-habits. They (55 %) look for personal help
from the teacher in Mathematics.

Under-achievers are interested more in out door
games. Their interest in indoor games is less as
compared to overs- and Normals-. More under-
achievers in comparison to overs- and Normals are
members of political parties and have given politics
as their hobby.

Under-achievers prefer more going in for Law and
other technical courses.

Study-hours, Attitudes, and self-concept do not
contribute to the under-achievement of this group.

2. BIOLOGY CURRICULUM

Unders-, Overs- and Normals- have been found to be
alike with respect to their problems. The MPOL does
not discriminate them.

Unders- have numerically more problems in the areas;
PLE, SPR, FVE and the total MPOL.

Study-hours, study-habits, and self-concepts do not
affect under-achievement in this group.

The Under-achievers possess more positive attitudes towards school, Peers, Teachers and studies as compared to Normals-.

Their most prevalent problems are;

'Apni Ma'nsik unati ki Chah Karna' (SRA); 'Atma Vishwas ki kami hona' (PPR); 'Apne vicharon ko Shabdon Me Theek se Vyakta Na kar Pana' (ACW); 'Samai Par Adheyen Pura Na kar Pana' (ACW); 'Adhyan Me Adhik Samai Na De Pana (ACW); 'Awashyak Pustakon ko Prapt Karne Me Kathinaai Hona' (CTP); Patheya Pustakon ko Samajhne Me Kathinaai Hona (CTP).

Biology under-achievers are less interested in Botany and Chemistry. They are given more to outdoor Games. Their reading interests are, more for 'detective', 'stories' and 'novels'. About 8.33 % have given out that their hobby was politics.

3. ASSOCIATED COLLEGES: MATHEMATICS

Specific problems on which the Under-achievers differ significantly from the overs- are:

1. 'Sidhante aur Gookshama Vicharon Ko Jaldi Na se Majh Sakna'.

2. 'Apne Vicharon ko Shabdon Me Theek se Vyakta Na Kar Sakna!

IN BIOLOGY CURRICULUM:

'Prabhavkari Dhang se Adheyen ki Vidhi Na Janna'

2. 'Mata Pita ke Mujhse Bahut Adhik Aasha Rakhna'

3. 'Awashyak Pustakon Ko Prapt karne Me Kathinaai Hona

4. 'vespreet Ling Walen se Kahan Tak Sambandh Rakha Jaeye Eh Nischay Na kar Pana'.

4. UNDERACHIEVERS: MATHS. & BIOLOGY (A, B & C):

A COMPARISON:

Underachievers from the Universities in Mathematics curriculum have more problems in the area of finances,

living conditions, and Employment (ELE); Courtship, Sex, and Marriage (OSM); Adjustment to College Work (ACW); Curriculum and Teaching Procedure (CTP) and the total MPOL.

Under-achievers from the Biology Curriculum express more problems in the area of Social-Psychological Relations (SPR).

5. Under-Achievers: ASSOCIATED COLLEGES VS

UNIVERSITY (U)

MATHEMATICS CURRICULUM

Under-Achievers from Associated Colleges have more problems as compared to the Under-Achievers from the University (U). Their problems concentrate in the areas of Health and Physical Development (HPD); Finances, Living Conditions, and Employment (ELE); Social -Psychological Relations (SPR); Personal-Psychological Relations (PPR); Home and Family (HF); Morals and Religion (MR); The Future; Vocational and Educational (VE); Curriculum and Teaching Procedure (CTP); and the total MPOL.

BIOLOGY CURRICULUM

Under-achievers from the Associated colleges in Biology do not differ significantly on any of the MPOL sub-score areas or its total from their counterpart in the University 'U'. Numerically the associated colleges under-achievers have expressed more problems in each of the eleven areas and its total 'Mean' value obtained for Associated Colleges is higher.

6. Results from the Interview of the Under-Achievers:

Under-achievers assigned their under-achievement to;

(a) 'Family's Economic Needs'.

(b) 'Defective College Education' including teaching, over-crowding in classes, improvised laboratories and not Having the books and proper place for studying'.

(c) Lack of motivation parental disinterestedness and Sociability they were neither praised nor scolded for their good or bad academic work. They did not feel free to discuss their problems with their parents and were viewed by their friends as quite social.

7. CAUSES OF UNDER-ACHIEVEMENT AS GIVEN OUT BY TEACHERS:

Teachers thought under-achievement due to 'incidental or chance factors' at the examinations.

Physics and Mathematics had largest backwards in Maths-group and in Biology group Chemistry was thought of as difficult subject.

Weak-background, non-academic activities, financial difficulties and lack of genuine interest in the subjects could be some of the possible reasons.

B. OVER-ACHIEVERS (A, B & C)

1. MATHEMATICS CURRICULUM

Over-Achievers from A, B & C the three Universities under study have fewer problems in the areas of Finances, Living conditions and Employment (FLE), Adjustment to College Work (ACW), The Future: Vocational and Educational (FVE), and Curriculum and Teaching Procedures (CTP), as compared to Under-Achievers.

Most prevalent problems on which the over-achievers ranked higher as compared to Under-are;

1. 'Sharirik Dristi se Bahut Akarshak Na Hona (HPD).
2. 'Logon Se Parichay Bardhana Me Sust Hona' (SRA).
3. 'Sabhi Baton Ko Bahut Gambhirta Purvak sochna Aur Karna' (FPR).
4. 'Adhyapken Ka Vidyarthion ki Bhavana Ka Khyal Na Karna' (GTF).

The Over-achievers have better study-habits and Attitudes. From Personal Data; Over-achievers are less interested in Chemistry and do not understand the teaching in the subject. Their reading interest seems more towards stories. They prefer academic courses more. Almost equal number prefer going to technical and teaching courses. Study-hours, Attitudes towards, School, Teacher, Peers studies and self concept do not appear to help their achievement.

OVER-ACHIEVERS: (A, B & C)

2. BIOLOGY CURRICULUM:

The three groups do not differ significantly on any of the eleven MPGL areas or its total.

As compared to other groups Biology Over-Achievers express numerically more problems in the areas of Social and Recreational Activities (SRA); Home and Family (HF). Adjustment to College work (ACW) and Curriculum and Teaching Procedure (GTF).

Most prevalent problems among this group, on which they rank high and differ significantly from the Under-achievers of this group are;

1. 'Mata Pita Ka Mere Liye Bahut Tyag Karne' (HF).
2. 'Kakhaen Bahut Bardi Hona' (TP).
3. 'Adheapkon Ka Vidyarthion Ki Bhavnaon Ka Khyal Na Karne' (OTP)

Personal Data Schedule:

Over-achievers are high in Attainment and put in more hours of study as compared to Normals. Study habits Attitudes towards School, Peers, School and Studies do not seem to help the achievement in this group. Many of the over-achievers in this ^{group} do not understand the teaching of Chemistry. Zoology, too, is felt difficult. They participate less in extra-curricular activities, and their reading interest seems high on stories. More over-achievers prefer teaching.

3. OVERACHIEVERS: Biology Vs Mathematics:

Biology Over-Achievers differ significantly from the Maths. over-achievers on the AQW area. They ^{express} ~~rank~~ more problems concerning Adjustment to College Work.

Maths. over-achievers marked more problems in the areas of HPD, FLE, SPR, GSN, HF, MR, FVE, OTP and the Total NPOL. The Biology over-achievers marked more problems in SRA, PPR and AQW. The groups do not differ on any of the areas except on AQW.

Specific problem which is most prevalent with the over-achievers of both the curriculums (Maths. & Biology) is: 'Adheapkon Ka Vidyarthion Ki Bhavna Ka Khyal Na Karne'. The over-achievers differ ^{from} the under-achievers on this problem, they also rank high.

Maths. over-achievers have higher intelligence and higher attainment. Study-habits, hours of study, attitudes and self-concept do not differentiate

the groups.

4. OVER-ACHIEVERS: ASSOCIATED COLLEGES (D) Vs. UNIVERSITY (C).

MATHEMATICS CURRICULUM

The over-achievers from the Associated Colleges are more concerned about Health and Physical Development' area of MPOL, on this area they differ significantly from the under-achievers.

The associated colleges over-achievers marked more problems in the areas HPD, FLE, SPR, PPR, HF, AGW, FVE, OTP and the total MPOL.

Specific problems that rank high and are checked frequently by the Over-Achievers of the associated colleges are:

1. 'Dhan Ke Sambandh Me Parivar Ka Ghintit Hona'
2. 'Sabhi Batan Ko Gambhirta Purvak Sochna Va Karna'.
3. 'Apni Pasand Ki Chizon Ko Pardhns Ka Bahut Kam Avsar Hona'.

The overachievers from the Associated Colleges have better study-habits and Attitudes so far as their attitudes towards school, Teachers, Peers and studies are concerned.

BIOLOGY CURRICULUM: Cvs. D.

Over-Achievers from the University (C) in the Biology curriculum seem more concerned with problems in the area of Social and Recreational Activities (SRA).

The specific problem on which Biology group over-achievers of the Associated Colleges rank high and check frequently is, 'Kam Vasan Ka Hona' in HPD area. This problem is marked by 70.99 % of over-achievers. Differences with under-achievers on this problem is significant.

The Biochemistry Over-achievers select seven problems alone from the OTT area.

Over-Achievers (Bio.) from the Associated Colleges have higher attainment and better study-habits as compared to over-achievers (Bio. from the University.) They do not appear to present any difference so far as their intelligence, study-hours, attitudes towards School, Teachers, Studies and Peers, and self-concept are concerned.

Results from the Interview Data of the Over-Achievers:

Over-Achievers attached importance to proper motivation and parental education. They had the necessary books and better reading conditions. They got immediate reward or punishment for their good or poor achievement. Parents of the over-achievers viewed Education 'Important'. They were required to study with specific professions in view. They did less of domestic work and were expected to participate in fewer out door activities.

C. NORMAL -ACHIEVERS:

MATHEMATICS CURRICULUM:

In comparison to Over-Achievers the Normal-Achievers have more problems in the Adjustment to College Work (ACW) area.

Normals-, have higher intelligence as compared to over- and higher attainment as compared to Unders-.

Normals-, put in more hours of study as compared to Unders- and over-. They have better study-habits in comparison to Unders-. They have more positive attitudes towards Studies, Peers, school and teachers in comparison to over-. Self-concept makes no difference.

Most Normal-achievers are not interested in

Chemistry. They find the teaching hard to understand and need personal help of the teacher.

The reading interest of Normals of this group is high on 'detectives'. They participate more in N.C.C. or other Social Service activities. More of them want to go in for academic courses.

NORMALS-BIOLOGY CURRICULUM.

Normals- (Biology) do not seem to differ from the Unders- and the overs-, on any of the eleven MPCL ~~area~~ areas or its total.

They put in lesser hours of work as compared to overs- and possess less positive attitude towards school, teachers, studies and peers as compared to Unders-.

The Normals are also less interested in Chemistry and many of them do not understand the teaching in the subject area properly. As compared to Unders- they are interested more in indoor games. They like reading ~~my~~ stories and about 13.37 % prefer sports as their hobby. Their participation in extra curricular activities is more than overs- and the Unders-. They take part in NCC and other social service activities more than overs-. More of them have set themselves for professional courses.

All the three groups i.e. Unders-, Overs- and Normals- feel that Chemistry is difficult for them.

Long absence, irregularity, Gappbazi, too much picture going and having much of social life affects the three groups of achievers almost equally.

II SUGGESTION

1. More efforts are needed to reduce the incidence of under-achievement as it means loss of potential and loss of human resource.
2. Universities and Colleges should employ methods of systematically discovering what problems are bothering their students. Awareness of these problems may be profitably used by the personnel workers, faculties and administrators.
3. The most prevalent problems characteristic of a student body or that of a selected population in a particular curriculum may be used for adapting ~~xxxxx~~ curricular offerings according to students' needs or as a basis for new development and revisions in the curricular, extra-curricular and guidance programmes in a College/ University.
4. Varieties of 'Personnel services' and 'referral^E services' should be strengthened. If such services are not available ~~x~~ they should be started on priority basis.
5. A programme which may establish a more personnalized relationship between teachers, students and student bodies be planned and executed. Students who are hard to "reach" or understand be approached more sympathetically and informally to avoid all kinds of polarisation between teacher and the taughts.
6. Information services in the Universities/ Colleges should be expanded and improved effectively. The

Information centre with some qualified staff should be able to give all the information about occupations, advanced studies, prospects in particular field and employment market. To inspire confidence in such centres it is essential that they should be able to provide 'placements' or give valid and useful informations.

7. Students' problems in Adjustment to College Work (ACW) and Curriculum and Teaching Procedure (CTP) should be carefully studied by the senior faculty members. If essential, educational content and methods may be geared to suit the needs of to-day and tomorrow rather than yesterday. Students difficulties should be ~~carefully~~ impartially examined and all efforts be made to remove them. 'Special class' in the form of seminar groups may be made and run more effectively and difficulties of the groups be kept in view.

8. There should be regular screening of students to obtain the knowledge of their problems from time ~~to time~~ to time and their referral to specialists be made who should be available in each institution.

9. Educational facilities should be distributed properly and impartially. Those who are really pressed with the problems in the area of finances and Living conditions should be adequately subsidized so that erosion of talents due to this reason is stemmed out. More poor boys funds or students Aid funds free-ships and scholarship should be available on the grounds of poverty and 'academic-potentiality'.

10. More hostels and 'students homes' with all amenities should be built up. Government or private philanthropic bodies should meet all the expenses of poor but talented students. 'Health Service' should form an essential-part of the 'hostels' to 'homes'.

11. Libraries should be strengthened. The need is more in Associated Colleges. Loan-libraries should be established where ~~from~~ from poor students and even other deserving students may get all the books (reference and text) that they need preferably for the whole session.

12. The increase in the size and number of Colleges and Universities calls for a technique which could personalise the student welfare and give him a sense of belonging and a feeling of self reliance.

Communalism, provincialism, casteism and politics that are alleged to decide all issues from admission to appointment in educational institutions ^{have} damaged the faith of students and people outside for any thing fair and just. This situation should be handled carefully and faith restored.

13. Gap between 'generations' should be reduced by effecting change of 'attitudes and providing orientation for adjustment to the 'new' and the 'coming'.

14. Teacher-taught ratio, financial and social status of teachers, physical equipments in colleges and Universities should be well looked into by those who matter and deficiencies be made up on urgent footing. Gap between the status and conditions available in Universities and colleges should be

reduced so far as possible.

15. The present examination oriented system which is mostly memory and chance centred where the aim of education is only passing the examination and getting ^{securing} maximum return with minimum input, highest number of marks by possessing ^s smallest quantum of knowledge, should be radically reformed.

16. There should be a series of orientation talks for the students coming from rural areas and backward classes to get them know the new surrounding and altered social relationships. A series of informal lectures on courses and curricula, proper methods of reading, sources of aid and information (Educational and Vocational), the use of library and traditions of the University/College, will go a long way in "personalizing" the institution for the students and helping them to feel more adjusted and homely.

17. The language gap from Intermediate to Degree stage should be properly handled. Those who are deficient in a particular language should be taught in their mother tongue and it should be made sure that standard books are made available to them in the regional languages.

18. Universities and Colleges should inculcate among their students ~~that~~ the habit of self-reliance and independence.

III SUGGESTION FOR NEEDED RESEARCH

1. A forward ~~looking~~ looking longitudinal study needs to be undertaken following the career of a group of under-achieving pupils through a period of few years and to find out differences between the Under-and the over-achievers.

2. The present study had the limited objective of

finding the problems of Under-, Over- and Normal-Achieving College Students. The Under-achievement may now be studied along a wider canvas of sociological and psychological background covering different stages of education.

3. Cluster of associated problems concerning the Under-achievers be discovered and the changes brought about by a planned problem-reduction programme be measured.

4. An experimental study of the Under-achievers may be planned controlling the cultural, occupational community and some other background factors.

Unconscious may also be explored using the projective techniques.

5. Under-achievement may be studied separately, in different curriculums; rural and Urban, industrialised and unindustrialised areas separately.

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APPENDIX — A

व्यक्तिगत विवरण-तालिका

(Personal Data Schedule)

Dr. S. K. PAL, M.A., M.Ed., D.Phil.,

Reader in Education

, and

P. C. SAXENA, M.A., M.Ed.

UNIVERSITY OF ALLAHABAD

॥—इस प्रश्न तालिका में आप की निजी समस्याओं की जानकारी प्राप्त करने के लिये आप से कुछ प्रश्न पूछे गये हैं। आप पूछे गये प्रश्नों का सही-सही उत्तर निस्संकोच दें ताकि समस्याओं का उचित रूप से अध्ययन किया जा सके। विश्वास रखें आपके उत्तर बिल्कुल गुप्त रखे जायेंगे।

कृपया इन्हें सर दें :

(जो आपके साथ सामु न हो काट दें)

जनिक व आर्थिक वृत्ति—

१. जन्म की तिथि.....

१. (क) नाम..... (ख) स्त्री/पुरुष (ग) विवाहित/अविवाहित

१. (क) आयु..... वर्ष (ख) जन्मतिथि..... ४. (क) कक्षा..... वर्ष.....

४ (ख) पाठ्यक्रम जिसमें आप पढ़ रहे हैं..... कला/विज्ञान/वाणिज्य/कृषि/टेक्निकल/.....आदि।

१. स्कूल/कालेज/यूनिवर्सिटी का नाम.....

१. (क) निवासी..... गाँव / शहर (ख) घर..... (ग) जाति.....

(परिगणित जाति के हैं ? हाँ/नहीं।)

५. (क) पिता..... जीवित/मृत (ख) पिता का शिक्षा स्तर..... (जैसे, मिडिल, हाईस्कूल, बी०ए०, एम्०ए०,

बी०ई०, एम्०बी० बी० एस०, आदि) (ग) व्यवसाय..... (जैसे नौकरी, व्यापार, कृषि, मजदूरी आदि)

(ग) वेतन/आय.....

६. यदि पिता की मृत्यु हो गई हो तो अभिभावक का :

(क) शिक्षा स्तर..... (ख) आप से सम्बन्ध.....

(ग) व्यवसाय..... (घ) मासिक आय/वेतन.....

(क) माँ..... मृत / जीवित / सीतेली (ख) माँ ने कहाँ तक शिक्षा पाई है ?..... (ग) क्या वे नौकरी करती हैं ?

.....हाँ/नहीं (ग) यदि नौकरी करती हैं तो मासिक आय / वेतन.....

(क) भाई-बहनों की संख्या..... (ख) पिता/अभिभावक की आय पर कुल कितने व्यक्ति आश्रित हैं ?.....

(ग) अपने भाई-बहनों में उम्र के हिसाब से आपका स्थान कौन सा है ? (पहला/दूसरा/तीसरा/चौथा/.....आदि)

६. (क) पढ़ाई के साथ क्या आप और कोई धन्धा करते हैं ? [जैसे, ट्यूशन या अन्य कोई अंशकालिक (Part-time) अथवा पूर्णकालिक (Full time)] कामहाँ/नहीं।

(ख) यदि हाँ, तो क्या आप अपने आपको, यका-यका/नींद से परेशान/उचाट मन अनुभव करते हैं ?हाँ/नहीं।

१०. आपके अंशकालिक अथवा पूर्णकालिक धन्धे का आपकी पढ़ाई पर क्या प्रभाव पड़ता है ?

हमेशा पिछड़ना / बहुधा पिछड़ना / कभी-कभी पिछड़ना / बहुत कम पिछड़ना / कभी नहीं पिछड़ना।

प्रश्नचिन्ता—

१. क्या आप खेल-कूद में दिलचस्पी रखते हैं ?

हाँ/नहीं।

२. यदि हाँ तो, (क) किन खेलों में आपकी रुचि है ?

१.....२.....

(ख) आप किन खेलों में सक्रिय भाग लेते हैं ?

१.....२.....

३. आपकी हॉबी (Hobby) क्या है ?

४. (क) क्या पुस्तक पढ़ना आपको अच्छा लगता है ?

हाँ/नहीं।

(ख) यदि हाँ तो, किस प्रकार की पुस्तकें पढ़ना आपको अधिक पसन्द है ?

(जैसे, जासूसी, उपन्यास, कहानी, धार्मिक, विज्ञान सम्बन्धी—इत्यादि).....

५. क्या आप किसी राजनीतिक पार्टी, सांस्कृतिक संस्था या क्लब आदि के सदस्य हैं ?

हाँ/नहीं।

(यदि हाँ तो, संस्था, पार्टी आदि का नाम लिख दें)

६. स्कूल/कालेज/यूनोवर्सिटी की किन-किन पाठ्य-क्रियाओं में आप सक्रिय भाग लेते हैं ?

(जैसे-यूनियन/ विज्ञान-क्लब / विभागीय परिषद् / नाट्य-परिषद् के प्रशासिकारी होना; सांस्कृतिक कार्यक्रमों आदि में भाग लेना / एन० सी० डी०, सामाजिक सेवा आदि में सक्रिय सदस्य होना, आदि).....

सिवृत्ति—

१. पढ़ाई के प्रति आपकी मनोवृत्ति कैसी है ?

अत्यन्त लगनपूर्ण / लगनपूर्ण / उदासीन / लापरवाह / अत्यन्त लापरवाह।

२. अध्यापकों के प्रति आपकी मनोवृत्ति कैसी है ?

अध्यापकों / आशाकारी / उदासीन / अवज्ञापूर्ण / विरोधपूर्ण।

३. सहपाठियों के प्रति आपकी मनोवृत्ति कैसी है ?

अत्यन्त मैत्रीपूर्ण / मैत्रीपूर्ण / सामान्य / झगड़ासु / अत्यन्त झगड़ासु।

४. विद्यालय कार्य के प्रति आपकी मनोवृत्ति कैसी है ?

अत्यन्त उत्सुकतापूर्ण/अभिरुचिपूर्ण/सामान्य अभिरुचिपूर्ण/उदासीन/अत्यन्त उदासीन।

भविष्य की योजनाएँ—

१. स्कूल/कालेज/यूनोवर्सिटी की शिक्षा के बाद आप और कौन सी शिक्षा लेंगे ?

(जैसे, बी० ए०, बी० एस० सी०, एम० एस्० सी०, एल० एल० बी०, डिप्लोमा, टीचर्स-ट्रेनिंग, टेक्निकल, मेडिकल इत्यादि)

२. पढ़ाई समाप्त करने पर आपका विचार कौन सा काम / व्यवसाय चुनने का है ?

APPENDIX - B.

INTERVIEW SCHEDULE FOR TEACHERS:

Name of the Professor:

University/College

1. Do you consider that academic achievement of each and every student is equal to their mental capacity ? Yes / No
2. (i) What percentage of your students generally achieve less than you expect of them?
- (ii) What percentage of your students achieve more than you expect of them?

3. (i) Do you consider that some of the students achieve more than their mental ability ? Yes/ No
- (ii) (If yes,) What are the factors that help them to achieve more than they promise to ?

- (iii) Why some of the students achieve less than their mental capacity ?
- The causes may be classified as
- | | |
|----------------------------|----|
| related to 1. Pupils | 2. |
| 2. Parents | 3. |
| and family 3. Community | 4. |
| 4. University/College etc. | 5. |

I Pupil

1. Health and Physical handicaps

- (i) Do pupils underachieve because of physical ailments ? yes / No
- (ii) If yes) which of the physical ailments could be responsible for underachievement ?
- e.g. (weak-eye sight-speech and Hearing defects, Headache-weak-constitution-Fatigue-casual and Prolonged illness etc.)

2. Academic backwardness

- (i) What are the subjects in which students usually secure poor marks. 1.
2.
3.
- (ii) What could be the possible reasons for under-achievement in the particular subject ? 1.
2.
3.
4.

6. Social Problems:

- (i) Do you consider lack of social adjustment responsible for underachievement among students? Yes / No
- (ii) (If yes) What type of social maladjustment do you notice among under-achievers?
- (Such as-Difficulty in adjustment with class-mates, teachers; financial condition; social status, age-differences; parental occupation, caste and religion.)

9. Emotional Problems:

- (i) Do students under-achieve due to emotional imbalance? Yes / No
- (ii) (If yes) Mention some of the emotional factors that cause under-achievement.
- 1.
 - 2.
 - 3.

II Family

8. (i) What percentage of students under-achieve due to the following factors:

- (a) poverty
- (b) parental adjustment
- (c) parental indifference
- (d) parental illness
- (e) parental education

- (ii) Are there other factors also that could be responsible for underachievement? Mention a few.
- 1.
 - 2.
 - 3.
 - 4.

III Community

9. (i) Which of the following factors in the community are responsible for under-achievement among students? Indicate in order of importance.

- (a) Occupational Pattern
Caste structure
Educational level
Social prestige

IV University College

- (i) Do you think that the present curriculum is in any way responsible for underachievement? Yes / No

- (ii) (If yes) In what way?

- (iii) What are your suggestions for solving the difficulties of students due to curriculum?
- 1.
 - 2.
 - 3.

(3).

(iv) Do you consider the extra-curricular activities are responsible for underachievement Yes No

(v) (If yes) In what way ?

(vi) Is teacher-behaviour related to under-achievement ? Yes

(vii) (If yes) Describe the types of teacher behaviour that generally leads to under-achievement.

1.
2.
3.

(viii) Could personal attention help under-achievers ? Yes/No

(ix) (If yes) In what ways ?

(x) Mention any other factor that could be responsible for underachievement.

11. What are your suggestions for overcoming underachievement ?

1.
2.
3.
4.

APPENDIX—C

INTERVIEW SCHEDULE FOR OVER- UNDER-ACHIEVERS

Name

College/University

1. You have achieved less/more than your capacity. Could you give reasons for your Under-,/Over-achievement.

(The causes may be in one or more of the following areas: learning difficulties or their absence; social adjustment or Maladjustment; Proper motivation or its lack; Family's economic needs-and prosperity, parental Education, Defective or good University/College education etc.)

- 1.
- 2.
- 3.
- 4.

2. Pupil

- (i) Do you have all the books that you need? Yes/No.
- (ii) Do you have a proper study-room? Yes/No.
- (iii) Do you have to go a long way to attend your school? Yes/No.
- (iv) (If yes) Are your studies affected due to this factor? Yes/No.
- (v) Are your studies affected due to your frequent illness or physical handicap? Yes/No.
- (vi) Do you find it difficult to adjust your self with your ~~class-mates~~ friends and class-mates? Yes/No.
- (vii) Do you often feel nervous, anxious, excited and depressed? Yes/No.
- (viii) Are you praised or schlded for you poor or good academic achievement? Yes/No.

3. Family

- (i) Do you find your achievement any way affected by the economic condition of your family? Yes/No.
- (ii) Do you think that the cultural level of the family has any way affected your academic achievement? Yes/No.
- (iii) How do your parents view education? Important/Neutral/Unimportant.
- (iv) Does your study suffer due to your too much involvement in domestic work? Yes/No.

What your parents expect of

you? about (i) Academic-Achievement

High/Average/ Low

(ii) Future Vocational
Plan

Medical/Engineering/
Teaching/Administrative/
Business/Any other.

(iii) Domestic Responsibility.

Much/ ordinary/ Little

(iv) Participation in
out door activities

Much/Average/Little

Do you feel free to discuss
your academic problems with
your parents?

Yes/ No.

University/College

(i) Has your achievement been
affected by teacher's competence?

Yes/No.

(ii) Do your studies suffer due to
bad college administration?

Yes/No.

(iii) Do over crowded classes and ill
equipped laboratories affect
your achievement?

Yes/No.

(iv) Has your achievement been any
way affected by ill organised
courses?

Yes/No.

(v) What do your teachers expect
of you?

High/Average/
Low/achievement

(iv) Do your teachers help you out
in your difficulties?

Frequently/
Casually/
Rarely

(vii) Do your co-curricular and
other activities hinder your
studies?

Always/Sometimes/
Never

(viii) What do your friends expect
of you?

as regards: (i) Studies

Brilliant/Average/
Dull

(ii) Social life

Much social/Social/
Unsocial.

(iii) Your participation in
Co-curricular
activities

Much/Average/Little

APPENDIX—D

मूनी समस्या जांच सूची

Mooney Problem Checklist
Ross, L. Mooney

(Hindi Adaptation of Mooney Problem Check-List)

College Form

३५

DR. S.K. PAL, M.A., M.E.D., D.PHIL., READER IN EDUCATION, AND P.C. SAXENA, M.A., M.E.D.,
UNIVERSITY OF ALLAHABAD, ALLAHABAD.



विनामिका
जन्म-तिथि स्त्री/पुरुष
कृपम जिसमें अध्ययन के लिए प्रवेश लिया है
—Arts, Science, Commerce, Agriculture, Engineering, Law, Medicine.....etc.
या का नाम

निर्देश

यह परीक्षा नहीं है, अपितु उन परीक्षा करने वाली समस्याओं की एक सूची है जिनका प्रायः विद्यार्थियों को सामना करना पड़ता है।
जैसे :—स्वास्थ्य, धन, सामाजिक-जीवन, आपसी सम्बन्ध, धर्म, अध्ययन तथा पाठ्यक्रम आदि की समस्याएँ। इस सूची को पढ़कर आप उन
समस्याओं को चुनें जिनका आपसे विशेष सम्बन्ध है, फिर इनका सारांश अपने खण्डों में लिखें। इसमें विशेष रूप से आपको निम्नलिखित
न कार्य करने हैं :—

१—इस सूची को धीरे-धीरे पढ़िये। प्रत्येक वाक्य पर सोचिये और विचारिये—और, यदि कोई समस्या आपको कुछ भी कष्टदायक प्रतीत
होती है तो उस समस्या को रेखांकित कीजिए, जैसे :—“(३५) परिवार में बीमारी”। इसी प्रकार पूरी सूची को पढ़िये और उन वाक्यों
को रेखांकित कीजिए जिनमें दी हुई समस्याएँ आपसे सम्बन्धित हैं तथा आपके लिए परेशानी या कठिनाई उत्पन्न करती हैं।

तीस—प्रथम कार्य समाप्त करने के बाद उन सभी रेखांकित समस्याओं पर फिर से ध्यान दीजिए और उनमें से जो समस्याएँ आपको विशेष
कष्टदायक लगें उनके क्रमाँकों के चारों तरफ एक वृत्त बना दें, जैसे :—“(३५) परिवार में बीमारी”।

तीस—प्रथम और द्वितीय कार्य पूरा करने के पश्चात् उत्तर पत्र के पीछे लिखे गये प्रश्नों के उत्तर दीजिए।

अधिकीय समय थकान अनुभव करना ।

कम वजन का होना ।

अधिक वजन का होना ।

पर्याप्त शारीरिक व्यायाम का न होना ।

पर्याप्त निद्रा का अभाव होना ।

दर्शनों के लिए पैसों की बहुत कमी होना ।

घर से खर्च के लिए बहुत कम सहायता मिलना ।

मित्रों की अपेक्षा अपने पास कम पैसा होना ।

घन का प्रबन्ध उचित रूप से न कर सकना ।

अल्पकालीन नौकरी की आवश्यकता होना ।

समोरजन के लिए पर्याप्त समय न होना ।

खेल-कूद के लिए बहुत कम अवसर मिलना ।

कला अथवा संगीत से आनन्द-प्राप्ति का बहुत कम अवसर होना ।

रेडियो तथा टेलीविजन से आनन्द-प्राप्ति का बहुत कम अवसर होना ।

अपने स्वयं के लिए समय का बहुत कम होना ।

1. बरपोक या धर्मोपेक्षा स्वभाव का होना ।

2. बहुत आसानी से घबरा जाना । [Bimbarressed हो जाना]

3. दूसरे लोगों के साथ आराम अनुभव न करना ।

4. कॉलेज में घनिष्ठ मित्रों का न होना ।

5. घर बापस आने पर किसी की अनुपस्थिति अनुभव करना ।

11. सभी बातों को बहुत भीमोत्साहपूर्वक सोचना और करना ।

12. अनावश्यक बातों के लिए चिन्तित रहना ।

13. बबराहट का होना ।

14. बहुत जल्द उत्तेजित हो जाना ।

15. आराम करने में कठिनाई अनुभव करना ।

16. लड़की-लड़कों का पूर्व निश्चय के अनुसार बहुत कम मिलना-जुलना ।

17. जिससे पूर्व निश्चय करके मिलने की इच्छा है उससे न मिल पाना ।

18. मिलने-जुलने के लिए उपयुक्त स्थानों की कमी ।

19. निश्चित करना कि क्या लगातार मिलने-जुलने रहे ?

20. किसी ऐसे के साथ सम्पर्क रखना जिसे परिवार वाले स्वीकार न करें ।

11. अपने माता-पिता द्वारा आलोचना किया जाना ।

12. माता द्वारा ।

13. पिता द्वारा ।

14. परिवार में बीमारी ।

15. माता-पिता का मेरे लिए बहुत अधिक त्याग करना ।

36. प्रायः धर्मोपासना [मंदिर, मस्जिद, चर्च प्रादि] के स्थानों पर अधिक न जाना ।

37. उपासना-गृहों की धार्मिक क्रियाओं से असंतुष्ट होना ।

38. अपने धार्मिक भक्त से भिन्न विश्वासों का रखना ।

39. आरम्भिक धार्मिक विश्वासों को छोड़ते जाना ।

40. उपासना और प्रार्थना के मूल्यों पर संदेह करना ।

41. प्रभावकारी ढङ्ग से अध्ययन करने की विधि को न जानना ।

42. अपने कार्य से आसानी के साथ ध्यान हट जाना ।

43. प्रागामी कार्यों की योजना न बना पाना ।

44. कुछ विषयों में बहुत ही थोड़ा पूर्व ज्ञान होना ।

45. कॉलेज से पहले की शिक्षा का अपर्याप्त होना ।

46. जीवन के कार्य [Life-work] में बिलंब होने से बेचैन होना ।

47. व्यवसाय-युवावस्था में अपनी बुद्धिमानी पर संदेह करना ।

48. अपने चुने हुए व्यवसाय के प्रति परिवार का विरोध होना ।

49. विद्यालय में जाने के उद्देश्य का स्पष्ट न होना ।

50. विद्यालय की उपाधियों के मूल्य पर संदेह करना ।

51. रहने के स्थान पर अध्ययन में कठिनाई होना ।

52. कक्षा के बाहर अध्ययन के लिए उपयुक्त स्थान का न होना ।

53. अध्यापकों के द्वारा पढ़ाई गई बातों को समझने में कठिनाई महसूस करना ।

54. पाठ्य पुस्तकों को समझने में कठिनाई होना ।

55. आवश्यक पुस्तकों को प्राप्त करने में कठिनाई होना ।

56. जतना सबल और स्वस्थ न होना जितना कि होना चाहिए ।

57. ज्वर, दमा, तथा चर्म रोग एवं अन्य रोगों का शीघ्र हो जाना । [Allergies]

58. घर में कभी-कभी पीड़ा होना या मारीपन अनुभव करना ।

59. धीरे-धीरे वजन का कम होते जाना ।

60. पर्याप्त खुली हवा और रोशनी न मिलना ।

61. कॉलेज के खर्चों के कारण कर्जदार होते जाना ।

62. विद्यालय-जीवन में बहुत कम पैसों से गुजर करना ।

63. धन की कमी से स्नातकीय शिक्षा पूर्ण न होने का भय होना ।

64. स्नातकीय शिक्षा के लिए धन की आवश्यकता होना ।

65. बहुत सी धार्मिक समस्याएँ होना ।

66. सभी तरह से अच्छा जीवन न बिता पाना ।

67. अपने अवकाश के समय का अच्छा उपयोग न कर सकना ।

68. अपनी सांस्कृतिक उन्नति की इच्छा करना ।

69. अपनी मानसिक उन्नति की इच्छा करना ।

70. आस्थाविश्वसित के लिए अधिक अवसरों की इच्छा करना ।

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१३६. किसी से प्रेम होना ।
 १३७. यह निश्चय करना कि क्या मैं प्रेम करता हूँ ।
 १३८. क्या वैवाहिक बंधन में बंध जायें, इसका निश्चय करना ।
 १३९. क्या मैं वास्तव में अपने भावी जीवन-साथी को जानता हूँ, इस पर संदेह करना ।
 १४०. किसी ऐसे से प्रेम करना जिससे मैं विवाह नहीं कर सकता ।

१४१. दोस्तों का घर पर स्वागत न किया जाना ।
 १४२. घरेलू जीवन दुःखदायी होना ।
 १४३. परिवार में कलह होना ।
 १४४. अपने परिवार के किसी सदस्य के साथ अच्छा सम्बन्ध निर्वाह न कर पाना ।
 १४५. अपने परिवार के किसी सदस्य की आवश्यकताओं से चिड़चिड़ाहट अनुभव करना ।

१४६. माता-पिता का पुराने विचार वाला होना ।
 १४७. सांख्यिक-जीवन में आध्यात्मिक तत्त्वों का अभाव अनुभव करना ।
 १४८. दूसरों में धर्म के अभाव से क्रोध होना ।
 १४९. प्रजाति [Racial] या धर्म सम्बन्धी विचारों से प्रभावित होना ।
 १५०. किसी भिन्न प्रजाति या धर्म वाले से प्रेम करना ।

१५१. अध्ययन में अधिक समय न दे पाना ।
 १५२. बहुत अधिक बाहरी कार्य-कलापों में रूचि रखना ।
 १५३. समय-समय पर दिये गये कार्यों को संयोजित करने में कठिनाई अनुभव करना ।
 १५४. नोट लेने में या रूप-रेखा बनाने में कठिनाई अनुभव करना ।
 १५५. मौखिक अभिव्यक्ति [Oral-report] में कठिनाई अनुभव करना ।

१५६. जीवन में सफल होने पर संदेह करना ।
 १५७. भविष्य के लिए पहले से ही योजना बनाने की आवश्यकता अनुभव करना ।
 १५८. यह न जानना कि वास्तव में मैं क्या चाहता हूँ ।
 १५९. विवाह तथा व्यवसाय की समस्याओं को एक साथ रखने की कोशिश करना ।
 १६०. सैनिक-सेवा में रुचि रखना ।

१६१. विद्यालय सम्बन्धी बातों में अच्छी सलाह देने वाले का अभाव होना ।
 १६२. अध्यापकों से व्यक्तिगत सहायता न प्राप्त कर पाना ।
 १६३. अध्यापकों से बातचीत करने के लिए अधिक अवसर का न मिल पाना ।
 १६४. अध्यापकों का विद्यार्थियों में रुचि न रखना ।
 १६५. अध्यापकों का विद्यार्थियों की भावनाओं का स्थान न करना ।

१६६. प्रायः गला खराब रहना ।
 १६७. प्रायः सर्दी-जुकाम होना ।
 १६८. नाक सम्बन्धी रोगों का होना ।
 १६९. बोझने में दोष होना [जैसे : चुतवाना, दूकलाना आदि] ।
 १७०. आँखों का कमजोर होना ।

१७१. रात में बेर तक नीकरी करना ।
 १७२. अशुविधाजनक स्थान में रहना ।
 १७३. मातायात या आदान-प्रदान की कठिनाई होना ।
 १७४. निवास-स्थान में एकाग्रता [Privacy] का न होना ।
 १७५. दोस्तों के आवर - सत्कार और मनोरंजन के लिए कोई भी स्थान न होना ।

१७६. सत्य सीखने की चाह होना ।
 १७७. आवर - सत्कार एवं मनोरंजन की कला सीखने की इच्छा रखना ।
 १७८. आकृति [Appearance] को और अच्छा बनाने की इच्छा रखना ।
 १७९. सिध्दाचार सुधारने की इच्छा रखना ।
 १८०. बातचीत के क्रम को जारी रखने में कठिनाई अनुभव करना ।

१८१. बहुत हँसपुर्छें एवं ईप्सायु होना ।
 १८२. झिड़ी या हठीला होना ।
 १८३. बहुत करने की आदत होना ।
 १८४. बिना सोचे-समझे बोलना या काम करना ।
 १८५. कभी-कभी छोटे बच्चों को तरह अपरिपक्व इच्छा से काम करना ।

१८६. जल्दी शुरू होना ।
 १८७. लापरवाह होना ।
 १८८. सुस्त होना ।
 १८९. बहुत बढ़ा-चढ़ाकर कहने की प्रवृत्ति होना ।
 १९०. कार्यों को पुराने रीति-रिवाज से न लेना ।

१९१. यौन-सम्बन्धी बातचीत से रोकना ।
 १९२. यौन-कार्य के विचारों से खुश हो जाना ।
 १९३. यौन-सम्बन्धी जानकारी की आवश्यकता होना ।
 १९४. यौन-इच्छाओं का अनुभव रहना ।
 १९५. विपरीत लिंग वालों से कहाँ तक सम्बन्ध रखना जाय यह निश्चय न कर पाना ।

१९६. घर में कुछ समस्याओं पर बातचीत करने में असमर्थ होना ।
 १९७. अपने तथा माता-पिता के विचारों में विरोध होना ।
 १९८. माता-पिता को खट कर जवाब देना ।
 १९९. माता-पिता का मुझसे बहुत अधिक आशा रखना ।

२००. आर्य पारिवारिक उत्तरदायित्व वहन करना ।

२०१. धर्मोपासना के लिए अधिक अवसरों की चाह रखना ।

२०२. सम्बन्धों के सम्बन्ध में अधिक जानकारी की इच्छा रखना ।

२०३. ईश्वर के मजदूरी होने की इच्छा करना ।

२०४. अपने कुछ धार्मिक विश्वासों में स्पष्ट न होना ।

२०५. कुछ नैतिक प्रश्नों पर विचार न रखना ।

२०६. सब पर अध्ययन पूरा न कर पाना ।

२०७. लक्ष्मी तरह ध्यान न लगा पाना ।

२०८. अपने विचारों को शब्दों में ठीक से व्यक्त न कर पाना ।

२०९. शत्रु-भंडार का बहुत सीमित होना ।

२१०. कक्षा में विचार-विमर्श के समय बोलने से डरना ।

२११. आर्य की शिक्षा की उपयोगिता में संशय होना ।

२१२. इस दुनियाँ में अपनी स्थिति क्या है यह न जानना ।

२१३. व्यवसाय के सम्बन्ध में निर्णय लेने की आवश्यकता होना ।

२१४. व्यवसाय के सम्बन्ध में सूचनाओं को प्राप्त करने की आवश्यकता होना ।

२१५. अपनी व्यावसायिक योग्यता को जानने की आवश्यकता होना ।

२१६. कक्षाएँ बहुत बड़ी होना ।

२१७. कक्षा में पर्याप्त विचार-विमर्श की कमी होना ।

२१८. कक्षाओं का अधिकतर हाईस्कूल कक्षाओं की तरह चलना ।

२१९. कुछ विषयों में अधिक परिश्रम की आवश्यकता होना ।

२२०. अध्यापकों के शिष्टाचार का अधिक सैद्धांतिक होना ।

२२१. गुरु सिर-दर्द होना ।

२२२. नासिक धर्म सम्बन्धी कष्ट होना । [केवल लड़कियों के लिए]

२२३. कभी-कभी बेहोशी या प्रयत्नता की अवस्था का अनुभव होना ।

२२४. श्वेत सम्बन्धी तथा कण्डू आदि की शिकायत होना ।

२२५. श्वेत सम्बन्धी विकार होना । [Glandular defects]

२२६. सन्तोषजनक भोजन न मिलना ।

२२७. एक ही प्रकार का भोजन लेते-लेते ऊब जाना ।

२२८. सन्तोषजनक के लिए बहुत कम पैसा का होना ।

२२९. कोई निश्चित आय न होना ।

२३०. भविष्य में आर्थिक सहायता का अनिश्चित होना ।

२३१. खेल-कूद में कुशलता का अभाव होना ।

२३२. प्रकृति के आनन्द को प्राप्त करने का बहुत कम अवसर मिलना ।

२३३. अपनी शक्ति के कार्यों को करने का कम अवसर मिलना ।

२३४. अपनी पसंद की चीजों को पढ़ने का बहुत कम अवसर मिलना ।

२३५. लोगों से अधिक उपयोगी विचार-विमर्श करने की चाह होना ।

२३६. किसी को पसन्द न करना ।

२३७. किसी के द्वारा पसन्द न किया जाना ।

२३८. यह महसूस करना कि कोई भी मुझे समझ नहीं पाता ।

२३९. यह महसूस करना कि मेरी परेशानियों को समझने वाला नहीं है ।

२४०. दूसरों को अपनी परेशानियों को बताने में कठिनाई महसूस करना ।

२४१. गलतियाँ कर जाने का भय होना ।

२४२. किसी भी विषय पर निश्चय न कर सकना ।

२४३. आत्म विश्वास की कमी होना ।

२४४. किसी श्रेष्ठ अनुभव का न भूल पाना ।

२४५. यह अनुभव करना कि जीवन में मुझे कुछ सार्थक नहीं मिलेगा ।

२४६. किसी प्रेम सम्बन्ध में निराशा होना ।

२४७. बालिका मित्र का होना ।

२४८. बालक मित्र का होना ।

२४९. किसी प्रेम सम्बन्ध का टूट जाना ।

२५०. अपना विवाह कभी भी होगा, इस पर संदेह करना ।

२५१. माता-पिता से हर एक बात न बताना ।

२५२. घर में बच्चों जसा समझा जाना ।

२५३. इच्छोता बालक होना ।

२५४. माता-पिता का मेरे विषय में बहुत से निर्णय लेना ।

२५५. घर पर अधिक स्वतन्त्रता की इच्छा करना ।

२५६. कभी-कभी बिना अभिप्राय के ही मूठ बोलना ।

२५७. जो मैं नहीं हूँ, वह होने का झोंग रचना ।

२५८. किसी बुरी आदत का होना ।

२५९. किसी बुरी आदत को न छोड़ पाना ।

२६०. गम्भीर संकट में पड़ जाना ।

२६१. परीक्षाओं के लिए परेशान रहना ।

२६२. सिद्धांतों एवं सूक्ष्म विचारों को जल्दी न समझ पाना ।

२६३. उचित ढङ्ग से तर्क करने में कमजोर होना ।

२६४. पढ़ने-लिखने की बातों में तेज़ न होना ।

२६५. कॉलेज में फेल हो जाने का भय होना ।

२६६. यह निश्चय करना कि क्या किसी नौकरी के लिए मैं छोड़ा जाये ।

अपने बुने व्यवसाय में नौकरी प्राप्त कर सकने पर सन्देश करना ।

कॉलेज की पढ़ाई के बाद आप क्या करें, इस विषय में सलाह की इच्छा करना ।

दूसरे सत्र [Session] के लिए पाठ्य-क्रम चुनना ।

किसी नौकरी के लिए सर्वोत्तम पाठ्य-क्रम चुनना ।

कुछ पाठ्य-क्रमों का ठीक से संगठित न होना ।

पाठ्य विषयों का एक-दूसरे से सम्बन्धित न होना ।

बहुत अधिक नियमों तथा अधिनियमों का होना ।

इच्छित विषय को न प्राप्त कर पाता ।

अनिश्चित विषय को लेने के लिए बाध्य होना ।

वर्तनी में विशेष तकलीफ होना ।

चुनने में कठिनाई होना ।

पैरों में तकलीफ होना ।

किसी शारीरिक विकार के कारण परेशान रहना ।

डाक्टरों की सलाह की आवश्यकता होना ।

छुट्टियों में काम पाने की आवश्यकता होना ।

अपने सभी खर्चों के लिए काम करना ।

बाहरी कामों को जितना अपने हित में अच्छा हो उससे अधिक करना ।

कम पारिश्रमिक (पैसे) पाना ।

वर्तमान काम (नौकरी) से असंतुष्ट होना ।

जो मैं करना चाहता हूँ उसके लिए बहुत कम अवसर पाना ।

बहुत बड़ा सामाजिक जीवन का होना ।

बहुत अधिक सामाजिक जीवन का होना ।

जल्दी छुट्टियों में करने लायक कोई भी रोचक कार्य न होना ।

यात्रा करने की तीव्र इच्छा करना ।

१. अधिक आत्म केन्द्रित होना । [Too self-centred]

२. दूसरे लोगों की भावनाओं को ठेस पहुँचाना ।

३. किसी ऐसे व्यक्ति से बचना जिसे मैं नहीं चाहता ।

४. दूसरे का बहुत जल्दी अनुकरण करने लगना ।

५. नेता बनने की योग्यता का अभाव होना ।

६. बहुत अधिक व्यक्तिगत समस्याओं का होना ।

७. बहुत आसानी से भाँसू बहने लगना ।

८. बुरे सपनों से परेशान होना ।

२६६. पागलपन के विचारों से कभी-कभी परेशान होना ।

३००. आत्म हत्या के विचार होना ।

३०१. चीन-विषयों पर बहुत अधिक चिन्तन करना ।

३०२. बहुत आसानी से काम उत्तेजना होना ।

३०३. विवाह के लिए बहुत अधिक प्रतीक्षा करने की समस्या होना ।

३०४. विवाह के सम्बन्ध में सलाह की आवश्यकता होना ।

३०५. विवाहित जीवन की सफलता पर संदेह करना ।

३०६. प्रेम तथा स्नेह की चाह रहना ।

३०७. घर बहुत ही कम आनाजाना ।

३०८. घर में ही रहना या उसके अधिक नज़दीक ही रहना ।

३०९. रिश्तेदारों का पारिवारिक बातों में हस्तक्षेप करना ।

३१०. अपने से भिन्न पारिवारिक पृष्ठभूमि की इच्छा करना ।

३११. कभी-कभी उतना ईमानदार न हो पाना जितना कि होना चाहिए ।

३१२. मन में दुःखदायी या दोष जन्मित भावना [Guilty-conscience] का होना ।

३१३. पहले की गई कुछ त्रुटियों को न भूल सकना ।

३१४. प्रलोभनों में आ जाना ।

३१५. आत्म नियंत्रण की कमी होना ।

३१६. कॉलेज के कार्य-क्रमों की ठीक योजना न होना ।

३१७. पुस्तकों में सच्ची दिलचस्पी न होना ।

३१८. स्मरण शक्ति का कमबोरा होना ।

३१९. गणित में कमबोरा होना ।

३२०. विद्यालय से अवकाश पाने की इच्छा करना ।

३२१. स्नातक हो जाने के बाद बेकारी का भय होना ।

३२२. नौकरी की तलाश करने का तरीका न जानना ।

३२३. नौकरी के लिए आवश्यक अनुभव की कमी होना ।

३२४. पूर्व निर्धारित लक्ष्य तक न पहुँच पाना ।

३२५. कॉलेज छोड़ने की इच्छा करना ।

३२६. परीक्षा में प्राप्त श्रेणी की योग्यता का उचित माप न होना ।

३२७. परीक्षाओं का अनुचित होना ।

३२८. कॉलेज के कार्य-क्रमों में बहुत कम पारस्परिक सम्बन्ध होना ।

३२९. कॉलेज वातावरण में कॉलेज के प्रति प्रेरक भावना का अभाव होना ।

३३०. विद्यालय में मनोरंजन की सुविधा का अभाव होना ।

प्रश्न

निम्न चार प्रश्नों का उत्तर दीजिए।

१. क्या आप सोचते हैं कि सूची में दी गई समस्याओं में से जिन वाक्यों के क्रमों पर आपने गोसाकार नियात्र लगाये हैं, उन समस्याओं का पूर्ण चित्र उपस्थित करते हैं? हाँ / नहीं।

यदि कोई अतिरिक्त कथन या व्याख्या देने की आपकी इच्छा है तो आप नीचे लिखें।

२. आप अपनी मुख्य समस्याओं को संक्षेप में व्यक्त करें।

३. इसी सूची में दी गई समस्याओं को प्रकट करने में क्या आप को आनंद का अनुभव हुआ? हाँ/नहीं
आपकी सभक्त में क्या यह कार्य सार्थक रहा? हाँ / नहीं।

क्या आप इस सम्बन्ध में अपनी प्रतिक्रिया (reaction) बता सकेंगे?

४. यदि आपको अवसर मिले तो क्या आप इनमें से किसी समस्या पर अपने कालेज के किसी अध्यापक से बातचीत कर सकेंगे? हाँ/नहीं।

यदि हाँ, तो क्या आप किसी विशेष व्यक्ति को जानते हैं जिससे आप ये बातें करना चाहेंगे?

हाँ / नहीं।

अध्ययन की आदतों और अभिवृत्तियों का सर्वेक्षण

Hindi Adaptation of
Survey of Study Habits and Attitudes

Prepared by Brown Holtzman (1956)

अध्ययन की आदतों और अभिवृत्तियों के सर्वेक्षण का अनुकूलन

A Research Project

by : JAGDISH PANDEY, M. A.

Under the Guidance of

M. C. JOSHI, M. A., A. M. (Stanford), Ph. D.

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सूचनाएँ

सर्वेक्षण का उद्देश्य अध्ययन की आदतों और
यों का पता लगाना है जिससे हम अपने
में सुधार ला सकें। यदि आप इसके उत्तर
से दें तो इस सूची के उत्तरों से आप को
और तरह पढ़ना चाहिए, इसकी अच्छी जान-
जाएगी। अगर आप ईमानदारी और विचार
से दिये गये प्रश्नों के उत्तर दें तो आप को
पढ़ने की कई गलतियों का पता लगेगा। इस
आप प्रत्येक प्रश्न का उत्तर दें। जितनी ही
ती से आप प्रत्येक प्रश्न का उत्तर देंगे इस
से आप को उतना ही अधिक लाभ होगा।
उत्तरों को पूर्ण रूप से गुप्त रखा जायगा।
आप सब प्रश्नों का स्पष्टता से उत्तर दें।

उत्तरों को दिये हुए 'उत्तर पत्र' पर लिखना है।
पत्रिका पर किसी भी प्रकार का चिन्ह नहीं
है। कुल ७० प्रश्न हैं। प्रत्येक का उत्तर पांच
किसी एक वर्ग में ही देना है। आप की सुविधा
एक पांच वर्ग नोचे लिखे हैं।

-शायद ही कभी (केवल १५% बार तक ही)

-कभी कभी (१५ से ३५% बार तक ही)

-बहुधा (३५ से ६५% बार तक ही)

-सामान्यतया (६५ से ८५% बार तक ही)

५-लगभग हमेशा (८५ से १००% बार तक)

आप जैसा करते हों या जैसा आप को लगता
हो उस प्रकार से उत्तर-पत्र पर प्रत्येक प्रश्न के क्रमों
के आगे निशान लगाये। उदाहरण के लिए पन्ना उलट
कर पहला प्रश्न देखिये "मैं अनुभव करता हूँ कि
अध्यापक विद्यार्थियों की 'समस्याओं' को नहीं समझते
हैं"। यदि आप यह अनुभव करते हैं कि अध्यापक
'शायद ही कभी' विद्यार्थियों की 'समस्याओं' को
समझते हैं तो आप उत्तर-पत्र में पहले प्रश्न के आगे
"शायद ही कभी" वाले खाने में रेखा खींच दें।
यदि समझते हैं कि अध्यापक विद्यार्थियों की 'समस्याओं'
को 'लगभग हमेशा' नहीं समझते हैं तो आप पांचवें
खाने में रेखा खींचिये। इसी तरह आप को जैसा लगे
उसी के अनुसार सोच समझकर केवल एक उचित
खाने में रेखा खींचिये। प्रत्येक प्रश्न के लिये केवल एक
ही खाने में रेखा खींचनी है इसका ध्यान रहे।

इन प्रश्नों के लिए कोई भी निश्चित "सही"
या "गलत" उत्तर नहीं है। हर एक उत्तर समझकर
दिया गया उत्तर उस व्यक्ति के लिये सही माना जाता
है। जितनी सीधेता और हो आसानी से
समझ में आयेगी, उतना ही अधिक लाभ होगा।

आप को अपने अध्ययन करने के बारे में बताता है कि आप अभी तक किस प्रकार से अध्ययन करते हैं। यह नहीं पूछा गया है कि आपको कैसे पढ़ना चाहिये या अनुभव करना चाहिए या दूसरे कैसे पढ़ते हैं या अनुभव करते हैं। आप को ज्ञान करने की शक्ति हो उसी के अनुसार उत्तर देना। किसी प्रश्न का उत्तर आप अपने अनुभव पर न दें पायें तो ऐसे प्रश्न का उत्तर, यदि उत्पन्न होती, तब आप क्या करते इसके अनुसार दीजिये।

१. मैं अनुभव करता हूँ कि अध्यापक विद्यार्थियों की समस्याओं को नहीं समझते हैं।
२. किसी एक अध्यापक को पसन्द न कर सकने के कारण मेरी पढ़ाई का कार्य छूट जाता है।
३. मैं अनुभव करता हूँ कि यदि मुझे अपनी रुचि के विषयों को चुनने का अवसर मिले, तब मैं और भी अधिक परिश्रम से अध्ययन करूँगा।
४. मैं किसी विषय को पसन्द नहीं करता या न कहूँ फिर भी अच्छी श्रेणी प्राप्त करने के लिये मैं कठिन परिश्रम करता हूँ।
५. जब मेरा घर के लिए दिया गया कार्य अत्यन्त लम्बा या कठिन होता है तो इस हालत में मैं हतोत्साह हो जाता हूँ। इस हालत में मैं दो निराशा के कारण उसे छोड़ देता हूँ या जल्दी से ही उस कार्य को उलट पलट कर उसके सरल भाग का अध्ययन करते हुए आगे बढ़ जाता हूँ।
६. निबन्ध लिखने या परीक्षा में उत्तर लिखने से पहले मैं यह निश्चय कर लेता हूँ कि जो कुछ पूछा गया है, वह मैं ठीक से समझ गया हूँ।
७. जो कुछ मैं जानता हूँ उसे लिखित रूप से ठीक से व्यक्त न कर सकने के कारण मैं निबन्ध लिखने या परीक्षा आदि के कार्यों में पिछड़ जाता हूँ।
८. मेरे अध्यापक, मेरे लम्बों को जल्दीबाजी से लिखा हुआ या गड़बड़ ढंग से लिखा हुआ कहकर आलोचना करते हैं।
९. कुछ कम संख्याओं अध्ययन करने के पश्चात्, अध्यापक मेरी रुचि नहीं रह जाती है।
१०. मैं व्याकरण के नियमों, परिभाषाओं को बिना उन्हें ठीक से समझे ही याद करता हूँ।
११. निबन्ध लिखने में या ग्रन्थ लिखित कार्य पर विशेष ध्यान देता हूँ।
१२. विद्यालय खुलने के पहले दो तीन सप्ताह के दिये गये कार्य को इकट्ठा होने देता हूँ। मुझे कोई चिन्ता नहीं होती है।
१३. दिये गये कार्य को जो मुझे स्पष्ट नहीं है, उसे और स्पष्ट करने के लिए कक्षा में पूछता हूँ।
१४. रुचि की कमी के कारण, स्कूल के कार्य अपने पढ़ने के विषय पर ध्यान देने में कठिनाई होती है।
१५. जब तक मेरी किसी विषय में रुचि नहीं है, मैं केवल "पास" होने भर के लिये पढ़ता हूँ। मैं विश्वास करता हूँ।
१६. परीक्षा देते समय मैं थका जाता हूँ। मेरे उत्तर अपनी पूरी योग्यता के अनुसार नहीं दे पाता हूँ।
१७. हिन्दी निबन्ध लिखने की शैली से मैं अप्रसन्न होता हूँ।
१८. जब मैं किसी आवश्यक कारण से कक्षा में पिछड़ जाता हूँ तो मैं पिछड़ने का कारण अध्यापक को सहायता के माध्यम से बताता हूँ।
१९. मेरे अध्ययन का मुख्य उद्देश्य अच्छी श्रेणी प्राप्त करना है।

कुछ विषय इतने अरुचिकर हैं कि दिये गये कार्य को करने के लिये मुझे अपने को बाध्य करना पड़ता है।

मैं अध्ययन करता हूँ तो किसी लड़का/लड़की के प्रति काल्पनिक विचार, भावी योजनाएँ आदि मेरे ध्यान में बाधा पहुँचाती हैं।

मैं विश्वास करता हूँ कि अच्छे ढंग से समय बिताना और जीवन में पूरा आनन्द उठाना भी उतना ही महत्व का है जितना अध्ययन करना। कोई दिया गया कार्य चाहे कितना हो और सन्तान वाला क्यों न हो, मैं जब तक कि वही कार्य पूरा न हो जाय, उसे नहीं छोड़ता।

पढ़ते समय मैं उन्हीं चीजों को नोट (लिखता) करता हूँ, जो बाद में बेकार सिद्ध होती हैं।

कक्षा में नोट लिखते समय जहाँ तक सम्भव होता है, मैं अध्यापक के सभी शब्दों को ठीक-ठीक नोट (लिख) कर लेने का प्रयास करता हूँ।

मैं प्रत्येक विषय के सभी नोट्स (लिखित सामग्री) बड़ी सावधानी के साथ क्रम में सजाकर एक साथ रखता हूँ।

मैं अनुभव करता हूँ कि मेरे परीक्षा में प्राप्तांक मेरी योग्यता का बिल्कुल ठीक-ठीक प्रदर्शन करते हैं।

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मेरी कुछ कक्षाएँ इतनी उबासी भरी होती हैं कि शिक्षा के भविष्य के छात्रों को प्रेरित करने में सक्षम नहीं हैं। सुनने के अभाव में शिक्षा के भविष्य के छात्रों को प्रेरित करने में सक्षम नहीं हैं। हवाई बहल बहल के अभाव में शिक्षा के भविष्य के छात्रों को प्रेरित करने में सक्षम नहीं हैं।

मैं परीक्षा की वापस की गई पुस्तिकाओं, लेखाओं और दिये गये गृह-कार्यों में शिक्षक द्वारा किये गये सुधारों की बिना चिन्ता किये ही उन्हें एक तरफ रख देता हूँ।

मैं अपने अध्ययन करने के स्थान को ठीक ढंग से रखता हूँ। वहाँ चित्र, चिट्ठियाँ या अन्य ध्यान बंटाने वाली चीजों को नहीं रखता।

पढ़ते समय लोगों का आना जाना या अन्य साधियों के ग्रुप, बहस या मगड़ से मेरे काम में बाधा पहुँचती है।

मैं अध्ययन करने के लिये बहुत देर को बाद तत्पर हो पाता हूँ।

वेचनी, सज की उत्पत्ति या उदासी के कारण मैं ध्यान एकाग्र करने में असमर्थ होता हूँ।

मेरे निबंध, लेख या घर के कामों को जब तक अन्तिम समय नहीं आ जाता, तब तक नहीं लिखता हूँ।

मैं अनुभव करता हूँ कि मैं उन्हीं विषयों को ले रहा हूँ जिनको मेरे लिये प्रत्यक्ष लाभ नहीं है।

जब मैं पढ़ने बैठता हूँ तो मुझे बहुत थकान, उबका और त्रिभुज आने लगती है।

मैं लिये गये सभी विषयों में समान रूप से उत्पत्ति करने की प्रयास करता हूँ।

मैं कालज में इसलिये पढ़ने जाता हूँ कि मुझे

इसके कारण बाद में शिक्षा के भविष्य के छात्रों को प्रेरित करने में सक्षम नहीं हैं।

मैं अनुभव करता हूँ कि मेरी परीक्षा में प्राप्तांक मेरी योग्यता का बिल्कुल ठीक-ठीक प्रदर्शन करते हैं।

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४४. कई पृष्ठों तक पढ़ चुकने के बाद, मुझे यह याद नहीं रहता कि मैंने अभी-अभी क्या पढ़ा है।
४५. जब मुझे कोई खास काम करना होता है या परीक्षा के लिये कुछ रटना होता है तो मैं कक्षाओं में नहीं जाता।
४६. मैं अपनी पढ़ाई की अपेक्षा पत्र-पत्रिकाओं को पढ़ने रेडियो सुनने, सिनेमा आदि जाने में बहुत सा समय बर्बाद कर देता हूँ।
४७. मेरा अध्ययन-कार्य अस्त व्यस्त, बिना किसी क्रम के रहता है और प्रायः आनेवाली परीक्षाओं के कारण ही पढ़ाई हो पाती है।
४८. पाठ्यक्रम से बाहर के कार्य जैसे दोस्तों के साथ खेल कूदों में भाग लेने या अन्य सस्थाओं का कार्य करने से मैं अपनी पढ़ाई में पिछड़ जाता हूँ।
४९. स्कूल के बाहर की समस्यायें जैसे आर्थिक कठिनाइयाँ, किसी के प्रेम में रहना, माता-पिता के साथ द्वन्द्व आदि के कारण मैं अपने स्कूल के कार्य को छोड़ देता हूँ।
५०. घर को दिये गये लिखित कार्य को मैं ठीक समय में जमा करता हूँ।
५१. पढ़ी जाने वाली सामग्री में से महत्वपूर्ण चीजों को जो बाद में परीक्षाओं में पूछी जाती है, ढूँढ़ निकालने में मुझे कठिनाई होती है।
५२. जब किसी लेख के ढंग के बारे में शंका होती है तो मैं किसी प्रचलित ढंग के अनुसार ही लिखना प्रसन्न करता हूँ।
५३. स्कूल से दिये गये घर के काम को करते समय मुझे रेडियो का बजते रहना अच्छा लगता है।
५४. जब किसी लम्बे विषय का अध्ययन करता रहता हूँ तो मैं समय-समय पर रुक कर मुख्य तथ्यों और सिद्धान्तों को जो पढ़े जा चुके हैं, दुहरा लेता हूँ।
५५. पढ़ने में जितना समय मैं लगाता हूँ उसके अनुपात में मैं बहुत थोड़ी चीजों को प्राप्त कर पाता हूँ।
५६. मेरे अध्ययन का कोई ठीक नहीं है, यह मेरी मानसिक स्थिति पर निर्भर करता है, जब मानसिक स्थिति ठीक रहती है तो पढ़ता हूँ अन्यथा नहीं।
५७. मैं कक्षा के अतिरिक्त प्रतिदिन तीन घण्टे या इससे भी अधिक पढ़ता हूँ।
५८. प्रत्येक बार पढ़ने के समय, मैं पहले ही पढ़ना बना लेता हूँ कि इस बार कितना पढ़ूँगा।
५९. मैं ध्यानपूर्वक थोड़े ही देर तक पढ़ पाता हूँ बाद पढ़ने से शब्द अर्थहीन लगने लगते हैं।
६०. पढ़ते समय ध्यान बिचलित करने वाले से अध्ययन कार्य में बाधा पड़ती है।
६१. पढ़ते समय शिक्षक श्यामपट (Black) पर जो भी चित्र रेखाचित्र, आंकड़े आदि जितने भी उदाहरण प्रस्तुत करते हैं, सबको उतार लेता हूँ।
६२. मैं घर के लिये दिये गये कार्य को प्रतिदिन ही रूप से पूरा करके रखता हूँ।
६३. मैं अपने पाठ को दूसरों के साथ बैठकर अपेक्षा अकेले बैठकर पढ़ना अधिक करता हूँ।
६४. जब किसी प्रश्न का तत्काल उत्तर देना तो मैं पहले दिये गये उत्तर को बदल देता हूँ बाद में पता लगता है कि पहला उत्तर सही था। इस तरह कम अंक पाता हूँ।
६५. परीक्षा की तैयारी करते समय जो चीजें होती हैं मैं उन्हें महत्व के अनुसार, पाठ्यक्रम में दिये गये क्रम के अनुसार या ऐतिहासिक के अनुसार रखता हूँ।
६६. परीक्षा में लिखते समय, मुझे लिखने की गलतियाँ (spelling) और हिन्दी विषय के ढंग में, लापरवाही हो जाती है।
६७. यद्यपि कि मैं परीक्षा में प्रश्नों का उत्तर देने के लिये अन्तिम क्षण तक कार्य करता हूँ फिर भी दिये गये समय के भीतर सभी प्रश्नों का उत्तर लिखने में असमर्थ रहता हूँ।
६८. यदि समय रहता है तो उत्तर-पुस्तिका करने के पहले मैं अपने उत्तरों को फिर से लेता हूँ।
६९. जब परीक्षा की कापियाँ या लेख लौटाये तो मैं देखता हूँ कि मेरी लापरवाही के मुझे कम अंक मिले हैं।
७०. मेरी समझ से इस तरह की प्रश्नावलियाँ ही बेकार हैं और ये किसी व्यक्ति को कुछ भी सहायता नहीं पहुँचा सकती।

APPENDIX — F

गोपनीय

★ सर्वाधिकार सुरक्षित हैं ★

सामान्य मानसिक योग्यता (बुद्धि)

परीक्षा

Test of General Mental Ability (or Intelligence)

मोहन चन्द्र जोशी

एम० ए०, ए० एम० (स्टैनफोर्ड), पी०एच० डी०

रीडर, मनोविज्ञान विभाग

काशी हिन्दू विश्वविद्यालय

द्वारा

निर्मित एवं मानकीकृत

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ह्युमैनिटीज सामान्य मानसिक योग्यता परीक्षा



इस प्रश्न-पुस्तिका पर न तो कुछ लिखना है, और न किसी तरह का चिन्ह बनाना चाहिये। सभी उत्तरों को केवल दिए गए उत्तर-पत्र पर लिखना होगा।

—: ❀ :—

प्रारम्भिक आदेश

इन प्रश्नों के द्वारा हम साधारण मानसिक योग्यता की परीक्षा करना चाहते हैं।

२० मिनट में, आपको १०० प्रश्नों के उत्तर देने हैं।

इस परीक्षा के आरम्भ होने से पहिले ही, इसमें दिए सब प्रकार के प्रश्नों को, और उनके उत्तर लिखने के नियमों को समझा दिया जायगा। सभी प्रश्न साधारण भाषा में लिखे हैं। प्रायः प्रश्नों के कुछ संभव उत्तर भी लिखे हुए हैं। उन दिये हुए उत्तरों में से आपका सबसे ठीक या सही उत्तर को चुनना है, और इसके बाद उस उत्तर के क्रमांक को, उत्तर-पत्र पर उस प्रश्न के (क्रमांक के आगे) खाने में लिखना है। कैसे लिखना है, यह अभी बताया जायगा। प्रत्येक प्रश्न का उत्तर, संख्या में देना है, अर्थात् अक्षरों में कुछ नहीं लिखना है। प्रत्येक प्रश्न का एक ही ठीक उत्तर है। समय अधिक नहीं है। सब प्रश्नों का उत्तर बहुत कम लोग दे पाते हैं। अतएव आपको खूब शोद्यता से काम करना चाहिये, और अधिक से अधिक प्रश्नों का उत्तर देना चाहिए अगर कोई प्रश्न आपको अधिक कठिन मालूम पड़े, तो उसे सोचने में अधिक समय नष्ट न काँजिए। उसे छोड़ कर अगले प्रश्नों के उत्तर दीजिये। यदि अन्त में समय बचे तो छोड़े हुए प्रश्नों के उत्तर ज्ञानने की कोशिश कीजिए, और अपने उत्तरों को दुहरा लीजिए।



ध्यान रखिये कि इस प्रश्न पुस्तिका पर आपको कुछ नहीं लिखना है, और न उस पर किसी तरह का चिन्ह ही लगाना है।

अब पन्ना उलटिए, और इसकी पीठ पर लिखे हुए उदाहरण ध्यान से पढ़िये।

अभ्यास के लिए उदाहरण

इस परीक्षा में जिस प्रकार के प्रश्न पूछे गये हैं, उनके उदाहरण नीचे दिए गये हैं। इनमें से कुछ के उत्तर भी उत्तर-पत्र पर दिए गये हैं। इनके अतिरिक्त कुछ और भी प्रश्न हैं जिनके उत्तर आप स्वयम् सरलता से लिख सकेंगे।

आइये, अब हम इनको पढ़ें :—

१. 'पर्वत' का अर्थ है—(१) पहाड़ (२) मैदान (३) ऊँचा (४) पत्थर
२. 'प्रधान' का अर्थ है—(१) धनी (२) मनुष्य (३) मार्ग (४) मुख्य
३. 'धनी' का उल्टा है—(१) विद्वान (२) दरिद्र (३) नीच (४) कमजोर
४. 'राजा' का उल्टा है—(१) साधू (२) भजा (३) सेटा (४) राज्य
५. २, ३, ४, ५, ६,...। इन संख्याओं के क्रम के अनुसार आगे का एक संख्या उत्तर-पत्र पर लिखो।
६. १६, १३, १०, ७, ४,...। इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
७. (१) कुर्सी (२) मेज (३) खाट (४) चूल्हा (५) कुत्ता—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
८. (१) जापान (२) दिल्ली (३) चीन (४) भारत (५) फ्रांस—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
९. हम आंगोठ्री हम लिए रहते हैं कि—(१) वह हमें देखने में अच्छी लगती है। (२) वह गरमी देती है। (३) वह काली होती है। (४) उससे घर की शोभा होती है।
१०. झुला लाभदायक वस्तु है क्या—(१) वह हमें छूप व चपरा से बचाना है। (२) वह कपड़े का धमता है। (३) वह सब जगह मिलता है। (४) वह हल्का होता है।
११. तीन बालक एक पंक्ति में बैठे हैं। प्रेम के दाहिने राम है। कृष्ण, प्रेम को बाईं ओर है, तो बीच में कौन है ? (१) प्रेम (२) राम (३) कृष्ण
१२. अनन्त का जन्म रामेश से पहिले हुआ। अग्रन्त से पहिले रमेश पैदा हुआ, तो आयु में सबसे बड़ा कौन है ? (१) अनन्त (२) रामेश (३) रमेश
१३. जैसे आकाश : नीला, वैसे ही घास : (१) मंज (२) हरी (३) नरम (४) घड़ी
१४. जैसे मछली : तैरना, वैसे ही मनुष्य : (१) कागज (२) खाना (३) चलना (४) देखना।

यदि किसी को कोई संका हो तो परीक्षा आरम्भ होने से पहिले पूछ लें। बाद में कुछ भी नहीं बताया जायगा।

आरम्भ करने की आज्ञा मिलने पर ही उत्तर लिखना आरम्भ कीजिए, और जितनी सीधता से हो उत्तर दीजिये।

जब तक कहा न जाय

कृपया

इस पन्ने को मत उलटिये ।

१ (पहला)

१. जाड़ों में ऊनो कपड़े पहने जाते हैं, क्योंकि—(१) वे कीमती होते हैं। (२) वे भारी होते हैं। (३) उनसे जाड़ा दूर होता है। (४) वे देर में धोये जाते हैं।
२. 'जल' का अर्थ है—(१) सरल (२) ज्वाला (३) जमीन (४) पानी
३. (१) कुली (२) ईंट (३) दीवार (४) पत्थर (५) कंकड़—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
४. 'पुण्य' का उलटा है—(१) लोभ (२) पाप (३) अहंकार (४) नीच
५. १, २, ४, ८, १६, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
६. अपने से बड़ों का आदर करना चाहिये क्योंकि—(१) उन्हें नाराज होने का अशर नहीं मिलेगा। (२) वे आदर के पात्र हैं। (३) सब कहते हैं। (४) वे अधिक बलवान होते हैं।
७. (१) सोमवार (२) शनिवार (३) बुधवार (४) रविवार (५) मंगलवार—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
८. 'निर्भय' का अर्थ है—(१) साहसी (२) डरपोक (३) परिश्रमी (४) गर्वित
९. सड़क पर बाईं ओर से दौ चलेना चाहिये क्योंकि—(१) बायाँ पैर हल्का होता है। (२) बाईं ओर नोकर लगती है। (३) आने-जाने में सबको सुविधा होती है। (४) सड़क बहुत चौड़ी होती है।
१०. (१) कौवा (२) मोर (३) चील (४) मैदक (५) घाज इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
११. २, ४, ६, ८, १०, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
१२. देव की आयु बासी से दुगुनी है परन्तु नवीन की आयु बासी से दो वर्ष कम है, तो सबसे छोटा कौन है ? (१) देव (२) बासी (३) नवीन
१३. ४, ७, १०, १३, १६, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
१४. मिट्टी पानी से भारी है। पानी, पत्थर से हल्का है। पत्थर, लोहा से भारी होता है तो सबसे हल्का कौन है ? (१) मिट्टी (२) पानी (३) पत्थर (४) लोहा।
१५. 'आकाश' का उलटा है—(१) पृथ्वी (२) महान (३) पाताल (४) दूर
१६. (१) मन (२) मस्तिष्क (३) आँख (४) कान (५) नाक इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
१७. 'युक्ति' का अर्थ है—(१) चेष्टा (२) उपाय (३) व्यर्थ (४) सफलता
१८. गंगा नदी से सिन्धु छोटी है किन्तु घाघरा से बड़ी है। यदि यमुना और सिन्धु बग़र है परन्तु ब्रह्मपुत्र से छोटी है, तो कौन सबसे छोटी है ? (१) गंगा (२) सिन्धु (३) घाघरा (४) यमुना (५) ब्रह्मपुत्र।
१९. 'अपना' का उलटा है—(१) आपका (२) मेरा (३) सबका (४) पराया।
२०. (१) किनारा (२) तालाब (३) समुद्र (४) नदी (५) नहर—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?

२ (दूसरा)

११. जैसे राम : आदमी, वैसे ही कौवा : (१) पशु (२) चराचर (३) कोयल (४) पक्षी
१२. (१) भवन (२) घर (३) भोपड़ी (४) कुटीर (५) कार्यालय—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
१३. 'तरल' का उल्टा है—(१) ठोस (२) गरल (३) पानी (४) पथर
१४. जैसे आदमी : हाथ, वैसे ही हाथी : (१) महाघत (२) सूंड (३) दाँत (४) पाँव
१५. १, ९, १५, २१, २७, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
१६. जैसे प्रेमी : नायिका, वैसे ही भक्त : (१) देवता (२) जिन्दि (३) वरदान (४) भावना
१७. (१) पुस्तक (२) कापी (३) कागज (४) रजिस्टर (५) स्याही—इन पाँचों में किस एक का बाकी चारों से कुछ मेल नहीं है ?
१८. ४, १२, २७, २८, ३६, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
१९. जैसे माँ : बेटा, वैसे ही गाय : (१) भैंस (२) बैल (३) बकड़ा (४) बच्चा
२०. १८, २५, २२, १९, १६, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
२१. सरोज को बाँसुरी से सितार पसंद है परन्तु तबला नहीं चाहती है जब कि उसे घोषा से सितार कम पसंद है, तो उसे कौन सबसे अधिक पसंद है ? (१) बाँसुरी (२) सितार (३) तबला (४) घोषा
२२. जैसे मनुष्य : धोला, वैसे ही पक्षी : (१) गाना (२) कूकना (३) भूंकना
२३. ३७, ३०, २३, १६, ९, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
२४. जैसे पहिया : गाड़ी, वैसे ही नाव : (१) माँझी (२) तालाब (३) पतवार (४) सड़क
२५. टोपी पहिनना अच्छा है, क्योंकि—(१) इससे शान बढ़ती है। (२) इसे अधिकारी भी पहिनते हैं। (३) यह सभ्यता का प्रतीक है। (४) यह सिर को धूप से बचाती है।
२६. जैसे घोर : कायर, वैसे ही हार : (१) विजय (२) डर (३) साहस (४) हर्ष
२७. ६६, ४८, २४, १२, ६, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
२८. जैसे मकान : ईंट, वैसे ही कुर्सी : (१) पथर (२) लकड़ी (३) टाट (४) मेज़
२९. (१) रम्य (२) बाँसुरी (३) निकट (४) दूर (५) कहीं—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
३०. ६४, ३२, १६, ८, ४, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।

३ (तीसरा)

४१. श्याम से राम चार वर्ष बड़ा है। संतोष से श्याम दो वर्ष छोटा है, तो कौन सबसे छोटा है ?
(१) श्याम (२) राम (३) संतोष
४२. मनुष्य को जोधन में नियमित रहना चाहिये, क्योंकि—(१) नियमित रहनेवालों को आयु बढ़ती है।
(२) इससे कार्यक्षमता बढ़ती है। (३) अनियमित लोग पागल हो जाते हैं। (४) नियम शास्त्रों लिखे हैं।
४३. १५, १२, ९, ६, ३, ... इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
४४. 'अन्तर्ध्यान' का उल्टा है—(१) अदृश्य (२) प्रकट (३) गतिवान (४) गुप्त
४५. जैसे माता : पिता : वैसे ही पुरुष : (१) स्त्री (२) मनुष्य (३) नारी (४) शक्ति
४६. 'प्रफुल्ल' का अर्थ है—(१) मुस्कान (२) उल्लसित (३) विराम (४) संतोष
४७. जैसे पहाड़ : हिमालय वैसे ही नदी : (१) सरिता (२) धारा (३) सगम (४) गंगा
४८. (१) विद्रूपक (२) प्रेमी (३) प्रिय (४) मित्र (५) आत्मीय—इन पाँचों में से किस एक का वाकी चारों से कुछ मेल नहीं है ?
४९. 'महिमा' का अर्थ है—(१) पुराण (२) माहात्म्य (३) प्रशंसा (४) दिखावा
५०. (१) बालक (२) तरुण (३) राम (४) वृद्ध (५) प्रौढ़—इन पाँचों में से किस एक का वाकी चारों से कुछ मेल नहीं है।
५१. १, ३, ५, ७, ९, ... इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
५२. जैसे : आग : लपट, वैसे ही जल : (१) नदी (२) प्रपात (३) तट (४) धारा
५३. (१) कुत्ता (२) सियार (३) गाय (४) बकरी (५) बैल—इन पाँचों में से किस एक का वाकी चारों से मेल नहीं है ?
५४. जैसे छुट्टाई : मन, वैसे ही फरलांग (१) कोस (२) गज (३) मील (४) सेर
५५. 'प्राचा' का उल्टा है—(१) उत्तर (२) प्रमात (३) आधुनिक (४) पश्चिम
५६. ५, ७, १२, १४, १९, ... इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
५७. प्रयाग की जन संख्या देहली से कम किंतु मैतीनाल से अधिक है जब कि यमुई से कलकत्ता की जन संख्या अधिक है। यदि देहली से यमुई की जन संख्या अधिक हो तो सबसे कम संख्या कहाँ की है ?
(१) प्रयाग (२) देहली (३) मैतीनाल (४) यमुई (५) कलकत्ता
५८. जैसे मोटर : चोड़ा वैसे ही : चालक : (१) रत्नक (२) मालिक (३) चतुर (४) सवार
५९. 'चोर-प्रस' का अर्थ है—(१) बहादुर (२) चोर-माता (३) चौरापो (४) संताप
६०. शोला से कोकिला अच्छा गाती है, लेकिन सुमति ने अम्बिका अच्छा गाती है। यदि कोकिला से सुमति अच्छा गाती है तो, कौन सबसे बुरा गाती है ? (१) शोला (२) कोकिला (३) सुमति (४) अम्बिका

४ (चौथा)

११. प्राणी तभी तक जीवित रहता है जब तक—(१) उसे जीना होता है। (२) वह भोजन करता है। (३) वह बीमार नहीं होता है (४) हृदय गतिमान रहता है।
१२. (१) पढ़ना (२) सोना (३) लिखना (४) धोना (५) हंसना—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
१३. हर एक लेखक कवि नहीं हो सकता है क्योंकि—(१) बालक कहानियाँ पसन्द करते हैं। (२) कवि को कष्ट सहना होता है। (३) सबमें एक सी प्राकृतिक प्रतिभा नहीं होती है। (४) कवि शिष्यों से झगड़ा करते हैं।
१४. (१) इतिहास (२) भूगोल (३) पणित (४) परीक्षा (५) भाषा—इन पाँचों में से किस एक का बाकी चारों से मेल नहीं है ?
१५. २, ५, ९, १४, २०, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
१६. (१) सेव (२) अमरुद (३) आम (४) कटहल (५) पपीता—इन पाँचों से किस एक का बाकी चारों से मेल नहीं है ?
१७. नारायण एक काम को चार घंटे में पूरा करता है तो गोपाल उसे सात घंटे में जब कि मदन उसके आधे काम को तीन घंटे में पूरा कर लेता है यदि बलवीर उसके दुगुने काम को छः घंटे में पूरा करता है, तो सबसे देर में कौन पूरा करता है ? (१) नारायण (२) गोपाल (३) मदन (४) बलवीर।
१८. ५६, ५०, ४५, ४१, ३८, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
१९. समुद्र में बाढ़ नहीं आती है क्योंकि (१) कुछ पानी के पहले ही मानमून वन जाने से उसका आयतन कम हो जाता है। (२) उसका पानी खारा होता है। (३) बहुत गहरा होता है। (४) अन्यथा प्रलय हो जायगा।
२०. ३, ६, १०, १५, २१, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
२१. जैसे स्वामी, सेवक वैसे ही राजा : (१) नागरिक (२) पंच (३) मंत्री (४) रंक
२२. ४५, ४०, ३६, ३३, ३१, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
२३. जैसे कविता : निबन्ध : वैसे ही लेखक : (१) कलाकार (२) कवि (३) कहानी (४) सम्पादक
२४. परीक्षा में श्यामा से पुष्पा ने अधिक नम्बर पाये परन्तु कमला से कम पाए। कमला का प्रमीला से पाँच नम्बर कम मिले, जब कि प्रमीला और इन्दु को बराबर नम्बर मिले ता सबसे कम नम्बर किसने पाये ? (१) श्यामा (२) पुष्पा (३) कमला (४) प्रमीला (५) इन्दु।
२५. १६, १३, २२, १९, २८, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
२६. जैसे नाटक : शुद्ध वेशे ही नायक : (१) लिपाही (२) नटी (३) अभिनव (४) पात्र
२७. १, ५, १०, १६, २३, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।
२८. क्रोध में कोई भी कार्य नहीं करना चाहिये क्योंकि—(१) कार्य बिगड़ जाता है। (२) उस समय विवेक नहीं रहता है। (३) कार्य प्रेम से करना चाहिये। (४) पिटने का भय रहता है।
२९. (१) घोड़ा (२) गधा (३) ऊँट (४) हाथी (५) गाय—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ?
३०. ४, ४, ५, ७, १०, इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो।

[प्रश्न ८१ के लिए पन्ना उलट कर पृष्ठ [पाचवाँ] पर देखिए। समय कम है, शीघ्रता से करिए]

५ (पाचवाँ)

८१. जैसे प्राणी : पत्थर, वैसे ही जीवित : (१) चेतन (२) अचल (३) निर्जीव (४) कंकड़ ।
८२. (१) अर्धघंटा (२) अर्ध (३) परसों (४) दिन (५) सप्ताह—इन पाँचों में से किस एक का बाकी वारों से कुछ मेल नहीं है ?
८३. ११, १३, १७, २५, ४१, । इन संख्याओं के क्रम के अनुसार आगे की एक संख्या उत्तर-पत्र पर लिखो ।
८४. 'अक्रान्ता' का अर्थ है—(१) घातक (२) मर्म (३) विध्वंसक (४) निषेध
८५. रामू की आय सुरेश से अधिक है किन्तु शंकर के बराबर है । सुरेश की आय पूरन से कम है किन्तु ललित से अधिक है । यदि पूरन की आय से रामू की आय कम हो, तो सबसे अधिक आय किसकी है ? (१) रामू (२) सुरेश (३) शंकर (४) पूरन (५) ललित
८६. 'प्रधान' का उल्टा है—(१) साधारण (२) छोटा (३) गौण (४) मंत्री
८७. (१) कवि (२) गरीब (३) सैनिक (४) दुकानदार (५) विद्यार्थी—इन पाँचों में से किस एक का बाकी चारों में कुछ मेल नहीं है ?
८८. 'विद्वित' का उल्टा है—(१) स्वस्थ-चित्त (२) सक्रिय (३) स्पष्ट (४) प्रमोद
८९. जैसे प्रकाश : ध्वनि वैसे ही आँख (१) लाल (२) गति (३) कान (४) नाक
९०. 'यात्रक' का अर्थ है—(१) शिशु (२) किशोर (३) नादान (४) वक्ता
९१. (१) कलाकार (२) मूर्तिकार (३) चक्राकार (४) चित्रकार (५) संगीतकार—इन पाँचों में से किस एक का बाकी चारों में कुछ मेल नहीं है ?
९२. 'सौम्य' का उल्टा है—(१) उन्मत्त (२) प्रपंची (३) निष्ठुर (४) क्रूर
९३. जैसे घास : पत्तो, वैसे ही पृथ्वी : (१) वायु (२) घोंसला (३) पेड़ (४) उड़ना
९४. 'लब्धज' का अर्थ है—(१) आदर (२) बयडाना (३) भुक्तना (४) मोड़ा
९५. गंगा नदी को मय "गंगा माँ" कहते हैं, क्योंकि—(१) वह हिमालय से निकलती है । (२) वह अनेक तीर्थों से होकर बहती है । (३) उससे जल पर विशाल भू-भाग की सतों निर्भर रहती है । (४) उसे पवित्र माना जाता है ।
९६. 'प्रसाद' का अर्थ है—(१) अनुग्रह (२) महल (३) इच्छा (४) प्रसाद
९७. जैसे विद्यार्थी : सैनिक, वैसे ही रोना : (१) पाठ (२) युद्ध (३) कत्ता (४) साथी
९८. (१) मनुष्य (२) पशु (३) पत्ती (४) व्यक्ति (५) चर—इन पाँचों में से किस एक का बाकी चारों से मेल नहीं है ?
९९. 'क्रोध' का उल्टा है—(१) गुस्सा (२) दया (३) शांति (४) क्षमा
१००. (१) अध्यापक (२) डाक्टर (३) राज-मन्त्री (४) वकील (५) बाबू—इन पाँचों में से किस एक का बाकी चारों से कुछ मेल नहीं है ।

❀ समाप्त ❀

[यदि समय हो, तो उत्तरों को दुहराएँ ।]



APPENDIX G

TABLE G 1

Chi-square value for the matched variables between Over- & Under-achievers. in the Biology & Maths Group, from different institutions.

Institution A₁ (Between O-U)

Variables	BIOLOGY GROUP		MATHS GROUP	
	X ² values	df	X ² values	df
Male & female	.19	1	.24	1
married & unmarried	.58	1	.27	1
Urban & rural	.001	1	.60	1
Age	3.37	1	1.24	1
Age at High school	2.34	1	1.02	1
Income	3.07	4	4.10	4
Parent's Occupation	3.00	3	1.90	3
Parents Education	5.44	3	1.94	3

Institution B

Male & Female	.37	1	.04	1
Married & unmarried	.45	1	.24	1
Age	.18	1	1.30	1
Urban & Rural	1.68	1	1.69	1
Age at High school	5.84	1	1.93	1
Income	2.60	4	4.37	4
Parents occupation	3.77	3	3.37	3
Parents Education	.75	3	5.02	3

Institution 9

Variables	χ^2 values	df	χ^2 value	df
Male & Female	1.13	1	.36	1
Married & Unmarried	.05	1	1.65	1
Age	.26	1	2.11	1
& Urban rural	3.31	1	6.20	1
Age at High school	.56	1	.0001	1
Income	2.94	4	12.48	4
Parent's Occupation	.38	3	11.12	3
Parent's Education	1.96	3	7.31	3

Institution D

Male & Female	.08	1	.08	1
Married & unmarried	1.68	1	.28	1
Age	2.39	1	.01	1
Urban & rural	.91	1	1.01	1
Age at the High school	.50	1	1.44	1
Income	11.71	4	2.18	4
Parent's Occupation	3.39	3	1.66	3
Parent's Education	1.49	3	3.11	3